Air Conditioning a Radio-TV Center . . . . . Pg. 20

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Let's Quit Selling the Steak and Sell the 'Sizzle'

(Conscience of the Industry Editorial by George F. Taubeneck)

FELLOW by the name of Elmer Wheeler made a small fortune by delivering the same speech over and over again to business groups, sales conventions, sales training classes, banquets, etc. Title of this speech: "Don't Sell the Steak, Sell the Sizzle."

Purport of his talk was that people don't buy a *thing,* they buy what it will *do* for them. Moreover, he continued, the prime buying motives are Prestige and Personal Improvement.

Wheeler's message can be applied to the residential air conditioning business. Perhaps we've been trying to sell the wrong thing: Comfort.

(Continued on Page 16, Col. 1)

New NFPA Standards Cover Heating-Cooling Systems

BOSTON—Combination heating and cooling units are covered for the first time in revised standards for the installation of air conditioning systems, both residential and commercial, published recently by the National Fire Protection Association.

Addition of a paragraph covering combination systems was one of a number of revisions adopted by NFPA at its annual meeting last May.

Other revisions refer to the material and installation practices for ducts, clearances between heating equipment and combustible material, and the prohibition of furnaces, boilers, and other heat producing appliances in under floor spaces when used as a supply or return plenum.

NFPA said that combination heating and cooling systems are of great importance in the fire protection field because, where used for heating, they may not only be a source of fire themselves, but may serve to spread fire and smoke through a building.

The NFPA standards contain precautions designed to minimize this danger, including fire doors or dampers arranged to close automatically in case of fire.

Failure to observe such precautions has in many instances resulted in heavy fire and smoke losses, NFPA said.

NFPA has two standards covering air conditioning. Stand-

(Continued on Page 29, Col. 5)

Fort Worth JICC Agrees On 15 Points

FORT WORTH, Texas — At the September meeting of the Joint Industry Construction Council of Fort Worth, agreement was reached on 15 items which had been under discussion since the group was organized last December, written up, and referred to the five groups represented for implementation.

Resolved were: painting of mechanical work; guaranty-warranty; bid opening time; temperature control wiring; handling of motors, starters, etc; cleaning; temporary lighting; temporary sanitary facilities; temporary water; drinking water; hoisting; cutting and patching; watchman; bond; builder's risk insurance.

Only item on which no agreement could be reached was bid taking methods. This was tabled but is to be taken up at a later date.

In the 15 items resolved, it was felt that ambiguities had

(Continued on Page 25, Col. 2)

Amana Develops 'Curtain Wall' Air Conditioner

AMANA, Iowa—Development of what is called "a unique 'Curtain Wall' air conditioner designed expressly to meet requirements of new curtain wall construction techniques" was announced recently by Amana Refrigeration, Inc.

S. J. Seibert, manager, Air Conditioning Dept., said that first units are now being installed in the new Colonnade Park apartments, three 22-story glass - and - aluminum walled buildings designed by Mies van der Rohe for a 30-acre site at Broad and Broadway in Newark, N. J. (Builder and developer is Metropolitan Structures, Inc.)

Seibert said ordinary room air conditioners designed for "in-the-window" or "through-the-wall" installations are not adaptable for curtain wall use, where metal and glass sections, or "curtains," are substituted for conventional walls and win-

(Continued on Page 29, Col. 3)

Gibson Dealers Shun Hawaiian Sights for Business Sessions

By George F. Taubeneck

HONOLULU, Hawaii — Strange characteristic of the American businessman is his ability—and willingness—to absorb verbal punishment.

Here, in one of the world's lush outdoor resort areas, every morning hundreds of Gibson refrigeration and air conditioning dealers meekly arise early, down a hasty breakfast, and dutifully sit through three lectures.

Mind you, it isn't compulsory. These businessmen are here as

(Continued on Back Page, Col. 1)

Outside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

The Big Five, Always Alive

Until quite recently Hawaii's economy was dominated by five big trading companies, all of which germinated from the opportune activities of sons and grandsons of missionaries and ship-jumping sailors.

Prudently the "Big Five" supplied capital needed to establish sugar and pineapple plantations, and today they retain substantial interests in the growing and processing of these crops.

As the Hawaiian economy matured, the "Big Five" moved into shipping, insurance, manufacturing, wholesaling, and retailing. More recently, they have invested in shopping centers, hotels, and housing projects.

Today their predominance is being challenged by mainland capital, which is building blocks of flats, hotels, motels, office buildings, factories — even schools and hospitals in and around Honolulu—and spreading out into neighboring islands.

Investment in Hawaii's economic growth is basic and sound. The population (which now numbers some 600,000) is increasing at a fast pace—nearly double that of the continental United States.

All this supercharged activity creates a continual demand for new houses, schools, shops, and goods and services.

If you can glom onto a few acres of land here, Buster, you'll get rich in a hurry.

Almost all substantial homes built in the 50th state nowadays are custom-designed "contemporary."

Hawaii has its own tropical-Pacific motif in architecture. And it's probably the only state where a traditional style house would cost substantially more than a "modern" (about 25% more!).

Reason is that "a traditional" uses considerably more material than a Hawaiian modern—

(Continued on Page 10, Col. 1)

RSES Meeting Opens Oct. 20

PORTLAND, Ore. — Preparations are being completed for the first annual meeting to be held by the Refrigeration Service Engineers Society in the Pacific Northwest.

The society's 23rd annual convention will be staged Oct. 20-23 at the Hotel Multnomah here.

Ten educational talks by industry authorities have been programmed for the meeting. One of the topics, "Electrolytic Actions In Refrigerating and Air Conditioning Systems," is

(Continued on Page 4, Col. 4)

'America's Goal for 1961' To Be Theme Of NWAHACA Convention Nov. 14-16

CLEVELAND—Forty-seventh annual meeting and national convention of the National Warm Air Heating & Air Conditioning Association will be held Nov. 14-16 in the Statler-Hilton hotel here, James M. Martin, managing director of NWAHACA, announced recently.

Theme of the convention will be "America's Goal for '61—Indoor Comfort for Everyone."

Martin said, "We moved our annual convention to November (last year it was held in December) after surveying the availability of the nearly 150 executives and businessmen who serve on committees, councils, and governing bodies of the association.

"Our plans this year will be an expansion of the format that was tested last year in St. Louis.

"This year, however, the convention will be even more modern and different, with sessions devoted to specific fields of industry interest running concurrently."

As an example, Martin explained that on Monday, Nov. 14, a special Dealer-Contractor

(Continued on Page 29, Col. 1)

Mathes Unveils Much Expanded Lines for 1961

AUSTIN, Texas—Greatly-expanded 1961 lines of room air conditioners, room air conditioner heat pumps, and residential-commercial-industrial equipment and heat pumps were unveiled here recently by The Mathes Co., division of Glen Alden Corp., at a national sales meeting.

During a day-long session attended by distributors and dealers from all parts of the country and by representatives from Mexico, Robert B. Starnes, president, sounded the theme, "Mathes is 'on target' beginning a new era of growth, plant expansion, and sales increases."

The following day, the distributors and dealers toured the expanded Mathes factory at Marble Falls where production lines were in full operation.

(Continued on Page 28, Col. 1)

Can't Use NLRB Machinery To Protect Illegal Practices, Examiner Says

NEW YORK CITY—A complainant cannot use National Labor Relations Board machinery to protect illegal practices that it is the purpose of the National Labor Relations Act to destroy.

On this premise, Trial Examiner Charles W. Schneider has recommended that the NLRB dismiss a complaint by Bomat Plumbing & Heating against the Plumbers Union of Nassau County, Local 457, United Association.

Bomat charged that the union committed unfair labor practices by picketing and other means at the site of the Shelter Rock Tennis Club to induce employes of other subcontractors to refuse to perform services for their employers to force Bomat to recognize and bargain with Local 457. Local 457 was not the certified bargaining representative of Bomat's employes.

During the hearing, it was brought out that Shelter Rock's contract with Bomat required that all labor supplied by Bomat shall be non-union. On the basis of this provision, Bomat refused to negotiate with the union.

Schneider pointed out that the National Labor Relations Act allows employers no choice as to whether they will hire on the basis of union membership or non-membership. It forbids such kind of selection or option.

Bomat contended that the contract is no defense against its complaint; that it is immaterial whether its actions are illegal and in violation of the Act; and that the union's proper course is to file unfair labor charges.

"In my opinion," Schneider said, "to find a violation of the Act in the Respondent's (union's) conduct here, and to issue the requested remedial order, would be to perpetuate a condition of affairs itself in derogation of law, would be contrary to the public interest, and is consequently to be avoided. Dismissal is therefore recommended on that ground alone.

Schneider also noted an additional reason for dismissal:

The attempt to use the board's processes here to further Bomat's unlawful hiring practices constitutes palpable abuse of the board's machinery.

Joint Refrigeration, Air Conditioning Training Council Formed In California

LOS ANGELES — After months of close teamwork and concerted effort on the part of both labor and management, a statewide joint training council for the California refrigeration and air conditioning industry has been formulated, it was announced recently.

The joint council will develop a training program for apprentices and journeymen of the air conditioning and refrigeration industry on a statewide level. The training program will also be designed to assist local school systems by cooperating in organizing and establishing apprentices classes and curriculums.

Representatives on the newly-organized joint council are members from local chapters of the Refrigeration & Air Conditioning Contractors Association of California (RACCA) and members of local chapter of the United Association in the state.

Organization of the joint council of labor and management was climaxed at a joint meeting last month between representatives from RACCA of California and representatives of the UA. The statewide council is the first of such organizations in the refrigeration and air conditioning industry in the United States, the announcement claimed.

Much of the background development effort for the council was spearheaded by Henry B. Ely, executive secretary of the Refrigeration & Air Conditioning Contractors Association, and Charles Voss, special representative of the UA.

At the meeting, temporary officers of the joint council were elected. James Scatena of Scatena-York Corp. in San Francisco was named chairman, while Gene Ballard, business manager of the Branch Local Union 250, UA, Los Angeles, was elected secretary.

Representatives of the joint council instructed the chairman and the secretary to develop and outline the purposes and goals for the statewide training program. When finally formulated, it will be submitted to labor and management groups for their consideration.

Commenting on the new council formation, Ballard said: "We of the United Association welcome the opportunity of providing additional training for apprentices and journeymen throughout the state of California in cooperation with the contractors. We believe that an excellent program will be developed to insure this objective."

He added that the new statewide joint training council was interested in bringing assistance training directly to the many joint apprentice committees that are functioning throughout the state. This will provide qualified and highly skilled men in every area for the installation and servicing of air conditioning and refrigeration equipment, it was stated.

Robert W. Kerr Named Fluor Products Pres.

LOS ANGELES — Robert W. Kerr has resigned as president and director of Fairbanks, Morse & Co. to become president of Fluor Products Co., a division of The Fluor Corp., Ltd.

He was also elected vice president and a member of Fluor Corp.'s board of directors.

In his new position, Kerr will head Fluor Products' diversified operations, including the manufacture of industrial cooling towers, air conditioning towers, and glued-laminated roof structures. The company is one of the nation's leading suppliers of these items.

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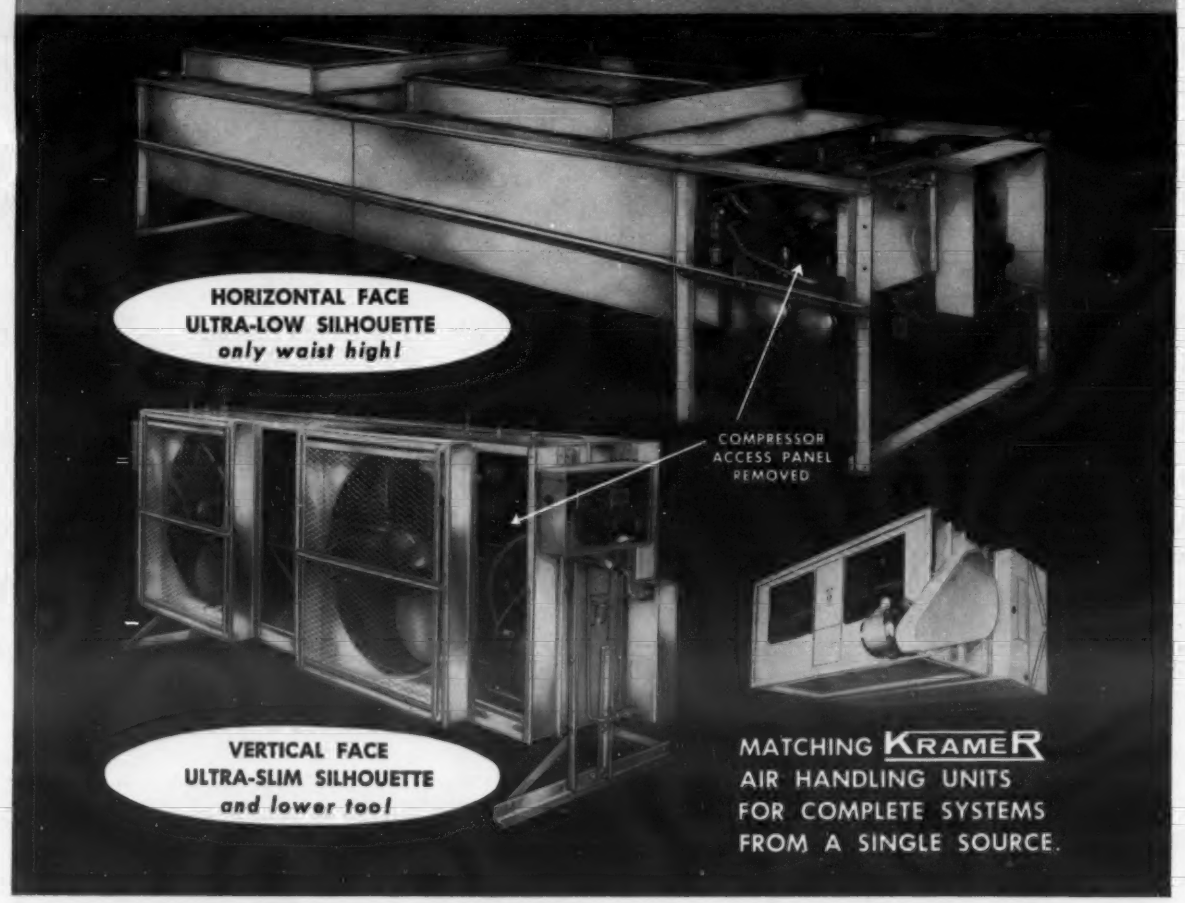

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The low, slim-trim lines of the new Kramer air-cooled UNICON-COMPRESSOR give it unequaled flexibility in any architectural setting. Space saving outdoor design and low, low operating weight combine to reduce structural and engineering problems. Easy and economical to install, the complete packaged UNICON-COMPRESSOR has matchless accessibility for servicing. Its corrosion resistant aluminum casing, and its frame galvanized after fabrication, eliminate painting maintenance.

And remember—no place in the U. S. A. is too hot (or too cold) for the UNICON-COMPRESSOR. With the patented Kramer Winterstat it will operate any time of the year, without adjustment, even in the dead of winter.

Write for bulletin C460B.

KRAMER TRENTON CO., Trenton 5, N. J.

47 YEARS OF CONTINUOUS ACHIEVEMENT IN HEAT TRANSFER

York To Transfer Decatur Engineers To York Plant

YORK, Pa. — Approximately 30 engineering employes of the Decatur (Ill.) plant of the York Div. of Borg-Warner Corp. will be transferred to the York plant shortly after the first of the year.

Joseph B. Elliott, York Div. president, and Richard J. Halloran, vice president and manager of the Decatur Works, said that the move will probably become effective about Jan. 20, the end of the present school term in Decatur.

The personnel involved are mainly in product design and development work. A smaller force of factory engineering employes will continue to operate in Decatur.

Elliott said that the move was made necessary by the advent of new products that will be produced at Decatur but used jointly by the Decatur and York plants.

"Because of this multiple application, especially of compressors, it is important for us to consolidate our research and development engineers at one location," he explained.

The York president did not elaborate on the "major new product lines" the company is planning but said that they were expected to expand production at both the York and Decatur plants.

The Decatur plant now manufactures the hermetic compressors used by both plants as well as the York line of room air conditioners and the firm's widely-used automotive air conditioning compressor, it was noted.

The York plant makes the larger residential and commercial air conditioners, furnaces, and engineered machinery air conditioning systems for major buildings.

Continental Equipment To Be At Dairy Show

MILWAUKEE — Continental Equipment Corp. here, manufacturer of ice builders and soaker bottle washers, will be among exhibitors at the 22nd Dairy Industries Exposition to be held Oct. 31- Nov. 5 in Chicago's International Amphitheater.

The company was inadvertently omitted from a list, published in the Sept. 26 issue of the NEWS, of refrigerating equipment manufacturers who will have displays at the show.

A company spokesman said that although the firm will not be exhibiting one of its ice builders, "we will be holding forth in booth #C-354 and we would like to invite anyone interested to come in and discuss them with us."

The Continental air agitated ice builders are manufactured in both direct expansion and full-flooded models and with ice storage capacities ranging from 1,500 to 80,000 lbs in a single transportable unit, he pointed out.

At New Facilities

Recold Schedules Sales Engineering Seminar at Columbus, Ohio Oct. 12

LOS ANGELES — Recold Corp. has announced its first sales engineering seminar to be held Oct. 12-14 at its new facilities in Columbus, Ohio.

This session "will offer an exhaustive study of all units produced by the company," the announcement said. "It also will give Recold's eastern and midwestern representatives new leads on how the equipment is best suited to provide maximum service in varied situations.

H. T. (Hy) Jarvis, president, said the engineering forum represented a new phase in Recold's approach to the expanding air conditioning and refrigeration market.

Subjects will stress how customers can best be advised on air handling units, the supermarket field, industrial refrigeration, and coil selection.

One of the highlights will be a visit to Recold's Columbus plant.

Key lecturers at the seminar will be D. D. Wile, Recold's executive vice president; S. Singer, manager of air conditioning products; W. L. Hilton, refrigeration sales manager; and C. M. Wilson, vice president in charge of sales.

The forum will close with a discussion of special problems and projects with reference to jobs in process being negotiated.

Memphis Will Get 'Shield'—No Dinner

The Memphis Indoor Comfort Bureau has postponed its Oct. 12 dinner-meeting but the National Warm Air Heating & Air Conditioning Association will issue an operating license to the group on that date at an informal ceremony in Memphis.

The dinner-meeting has been scheduled for Oct. 12 at the Peabody hotel (see earlier story on page 15). NWAHACA said the new Indoor Comfort Bureau will commence to promote, sell, and furnish Silver Shield heating and cooling systems to the greater Memphis market immediately.

Powers Branch Moves

SACRAMENTO, Calif. — Branch manager Ezra Thompson has announced The Powers Regulator Co. here has moved to an office and warehouse at 7500 14th Ave., Sacramento 20.

White-Rodgers Acquires Gas Burner Assets of Tube Fabricating Co.

ST. LOUIS — White-Rodgers Co., automatic controls maker, announced it has acquired those assets of Robinson Tube Fabricating Co. of Conway, Ark., which are incident to the gas burner manufacturing operations of that company.

The manufacture of gas burners for use on appliances, hot water heaters, and gas-fired furnaces formerly carried on by Robinson Tube Fabricating will be integrated with the activities of Configured Tube Products Co., a wholly-owned subsidiary of White-Rodgers.

The gas burner operation of Configured Tube Products was acquired by White-Rodgers in July of this year.

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Here's another Lau first, designed to help solve those cramped space blower installation problems. The versatile Lau "Electrowheel" is recommended for use whenever air moving efficiency is a requirement but space limitations present a problem. The "Electrowheel" is extremely efficient when operating where the utmost in compactness and smooth, quiet operation is required.

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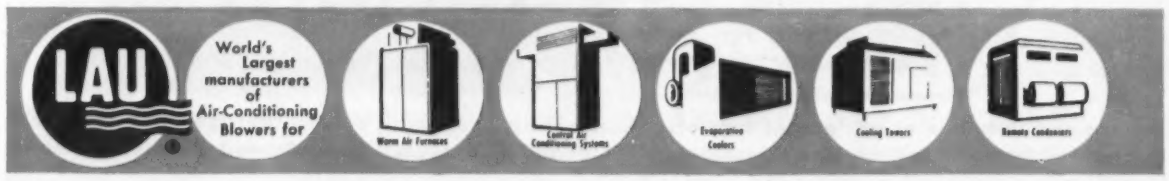

G-E and IUE Continue Talks

NEW YORK CITY, Oct. 6—Representatives of the striking International Union of Electrical Workers and the General Electric Co. were meeting with Federal mediators here today, although James B. Carey, IUE president, has described mediation talks as fruitless.

Among some 50 of the 166 G-E plants affected by the strike are the Air Conditioning Dept. at Tyler, Texas and the Appliance Park plants in Louisville, the latter producing room units and major appliances.

G-E has posted signs at some plants notifying workers that the "plant is open" and at Appliance Park there was some production, and some shipments being made, company officials reported.

Vaughn To Head Whirlpool's Newly Established Icemaker Component Div.

ST. JOSEPH, Mich. — Establishment of a new Icemaker Component Div. to develop and market current and future automatic icemaker units for use in refrigerator-freezers and self-contained icemakers was announced recently by Whirlpool Corp. Vice President R. B. Willemin.

Willemin stated that "establishment of the new division reflects the company's recognition of continuing growth of consumer demand for refrigerators with the convenience of completely automatic ice cube supply.

"This new division will be the second major activity to be included in Whirlpool's recently organized Special Products Operation," Willemin said. "The Special Products Operation, established in January of this year to develop and market products outside the company's major line of home appliances, also includes the Commercial Laundry and Dry Cleaner Div.

"D. W. Vaughn, former director of industrial relations at Whirlpool's refrigeration division at Evansville, Ind., will be general manager for the new Icemaker Component Div.," Willemin said.

Julian K. Sprague Dies

WILLIAMSTOWN, Mass. — Julian K. Sprague, 57, president of Sprague Electric Co., died recently of a heart attack at his ranch in Presidio, Texas.

RSES Convention Program--

(Continued from Page 1, Col. 1)

"an RSES premiere," it was pointed out.

Other talks will deal with the ARI certification programs, display case lighting, vacuum pumps, air cleaning, changing components and compressor burnout procedure in domestic refrigerators, built-in insulating rooms, effect of gases and heat on refrigerants and oil, field recognition of electrical power for refrigeration and air conditioning, and packaged heat pumps.

Always a popular convention feature, "Information Please" sessions will be held Friday, Saturday, and Sunday mornings, Oct. 21, 22, and 23. They will provide the audience an opportunity to secure answers to individual problems from a "Board of Experts."

Registration starts at 9 a.m. on Thursday, Oct. 20, with the convention formally opening at 1 p.m. to receive reports of the association's progress and future plans. Another business session will be held on Saturday, Oct. 22, for the election of officers and directors and to receive convention committee reports.

Main social event will be the annual banquet and entertainment Saturday evening.

PROGRAM

THURSDAY, OCT. 20

4 p.m. — Selected films from RSES Educational Library.

FRIDAY, OCT. 21

9 a.m. — "Information Please." John H. Spence, educational director, chairman.

10 a.m.—"What the Air-Conditioning & Refrigeration Institute's Certification Programs Mean to You and Your Customers," Rudy Berg, vice president, Copeland Refrigeration Corp., and president, ARI.

11 a.m.—"Under Proper Lighting —Meats Look Better," R. L. Smith, C. and I. specialist, North Pacific sales district, General Electric Co., Portland, Ore.

2 p.m.—"The Application, Use, and Servicing of Vacuum Pumps," Joseph P. G. Davis, manager, western regional office, Kinney Mfg. Div., The New York Air Brake Co., Los Angeles.

3 p.m.—"A Primer of Air Cleaning," W. H. Larson, vice president, R. E. Chase & Co., Inc., Tacoma, Wash.

4 p.m. — "Changing Components and Compressor Burnout Procedure in Domestic Refrigerators," A. E. Manning, vice president, Kelmore, Inc., Newark, N. J.; past international president and assistant to the president of RSES.

SATURDAY, OCT. 22

9 a.m. — "Information Please" (2nd session).

2 p.m. — "Built-In Insulated Rooms — Some Problems," Alan R. McGarvey, manager, industrial insulation research, Armstrong Cork Co.

3 p.m.—"The Two Evils—Air and High Temperature," Dr. Walter O. Walker, dean, Div. Research and Industry, University of Miami, Coral Gables, Fla.; consultant to General Chemical Div., Allied Chemical Corp.

4 p.m.—"Field Recognition of Electrical Power for Refrigeration and Air Conditioning," Arthur H. Dietz, owner, Electric Service Shop, Vacaville, Calif.

SUNDAY, OCT. 23

9:30 a.m. — "Information Please" (3rd session).

10 a.m. — "Packaged Heat Pumps," Raymond G. McGready, manager, special projects developments, Unitary Equipment Operation, Carrier Air Conditioning Co.

11 a.m.—"Electrolytic Actions in Refrigerating and Air Conditioning Systems," Ralph E. Porter, technical services and sales representative, Standard Refrigeration Co., Chicago.

Recold Names Miami Rep

LOS ANGELES — Recold Corp. has named C. Kelsey Sanders of Box 56, Little River Station, manufacturers' representative in the Miami area for a decade, to represent its air conditioning line.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

ALCO'S New P.O.S.
CHILLER CONTROL
THERMO EXPANSION VALVE

Illustration shows assembly of:
1. P. O. S. Regulator and Solenoid Stop
2. TCL—Pilot Thermo® Valve
3. H290—Line Strainer

Alco's New P. O. S. Valve is engineered with the Solenoid Pilot Stop Valve as an integral part of the P. O. Valve.

ALCO P. O. S. VALVE ASSEMBLY—designed and engineered specifically for wide load applications—particularly recommended for refrigeration systems having capacity reduction—the ALCO SOLENOID PILOT STOP VALVE insures positive liquid "Shut-off."

ALCO PILOT OPERATED THERMO EXPANSION VALVES—give a positive control to 15% of nominal capacity with minimum superheat.

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Capacities: 20 to 200 tons
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Council To Handle Service Through Authorized Depots

FORT SMITH, Ark.—Council Mfg. Co. here announced a new service policy under which all service on its "Icemakers" and "Drinkmakers" for the first year will be contracted for and paid for by the company.

"The ice machine dealer will simply sell and install the machines," the company stated. "He will tell his customer that should service be required on the machine to call Council's authorized factory service representative.

"Factory service depots are being set up at strategic places across the country. Authorized servicemen are to be trained at the Council plant in Fort Smith.

"In cases where the dealer has facilities and wishes to service the Icemakers and Drinkmakers, his firm may be appointed as the authorized factory depot. In such cases, the dealers' servicemen will undergo training in Fort Smith.

"We feel that this is a bold step forward insofar as Icemakers are concerned," said Dansby A. Council, president.

The company said the policy was being offered "after extensive testing in the field and queries to equipment dealers."

New Wholesaler In St. Louis Operating In Temporary Location

ST. LOUIS—One of the industry's newest refrigeration wholesalers is Spence-Frank & Co. here.

The company was formed last April 1 with Harold A. Spence and Donald P. Frank as partners. It is operating in a temporary location at 7029 Manchester Blvd., St. Louis 17 (telephone MIssion 5-5163).

The firm represents several nationally-known lines of refrigeration and air conditioning components, specialties, and equipment.

According to Spence, the company handles the complete line of Dunham-Bush products; Bendix - Westinghouse condensing units and parts; Mueller Brass refrigeration valves, driers, copper tube, and fittings; Ansul Chemical products; "Ucon" refrigerants; Penn controls; White-Rodgers controls; Calgon water treatment products; Bridgeport Brass products; and various other items.

Both Spence and Frank have had experience with a prominent St. Louis wholesaler.

K. G. Brown To Show At Beer Convention

MATTITUCK, L. I., N. Y.—The K. G. Brown Mfg. Co. here, designer and manufacturer of automatic ice vending equipment, has announced it will participate in the National Beer Wholesaler's annual convention to be held at the Netherland Hilton hotel in Cincinnati, Oct. 16-18.

The firm will display its brand-new "Junior," 4 by 8 ft model at Booth No. 10.

Dairy Show Folder Now Available Free From DISA

WASHINGTON, D. C. — A giant folder, containing a floor plan for the 22nd Dairy Industries Exposition, a list of the more than 350 exhibitors, and last-minute information on the Oct. 31-Nov. 5 event, is available on request from the exposition's sponsor, Dairy Industries Supply Association, 1145 19th St., N.W., Washington 6, D. C.

Cleveland Residents Can Pay for Electronic Air Cleaners on Monthly Electric Bill

CLEVELAND — Residential customers of the Cleveland Electric Illuminating Co. can pay for purchase and installation of electronic air cleaners in instalments on the monthly electric service bill if they wish, it was reported recently.

Arrangements may be made with any of the more than 100 "Housepower" electrical contractors in this area who are cooperating in installing wiring, lighting equipment, or other built-in electrical home equipment on the utility's "Wire on Time" plan.

The "Wire on Time" plan offers homeowners the option of paying for the electronic air cleaner, or other electrical equipment, in monthly instalments of as low as $5, and they may take up to five years to pay, depending on the cost of the installation, it was stated.

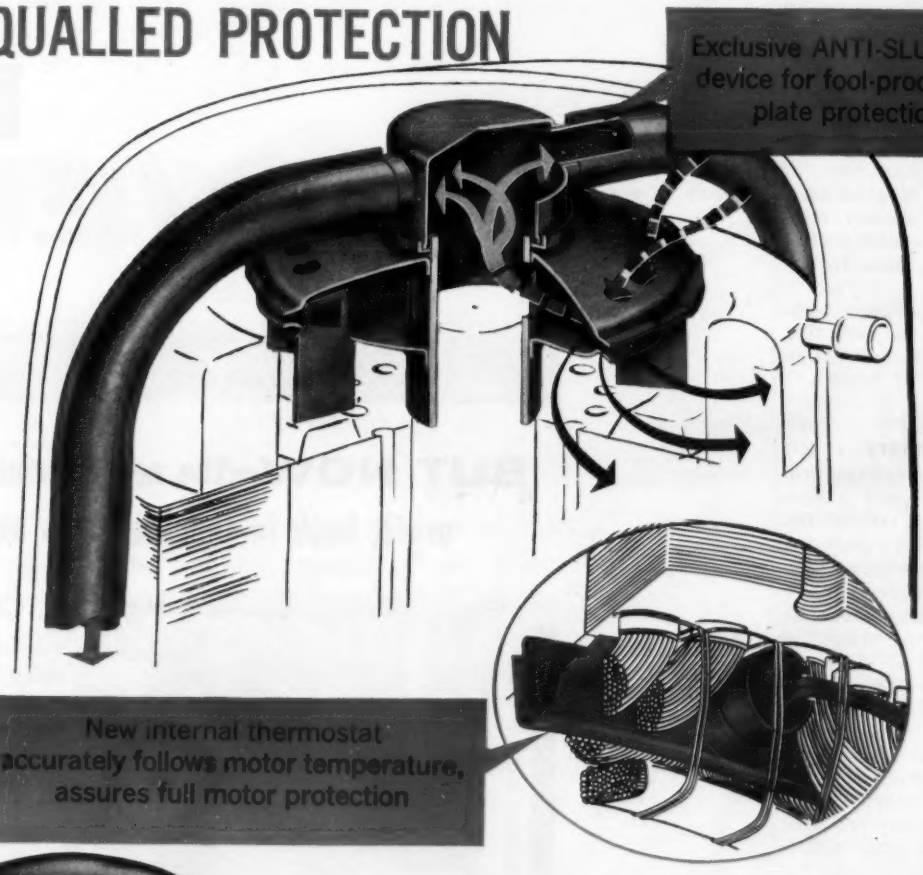
Hotel Exposition Will Have 645 Exhibitors In New York City

NEW YORK CITY—Thomas C. Deveau, chairman of the 1960 National Hotel Exposition and vice president and general manager of the Park Sheraton hotel, announced that the Show, set for Nov. 14-17, will have a record-breaking 645 exhibitors —31 more than last year, and 326 exhibits—42 more than the 1959 show.

Thermoelectric News from Tecumseh

With the recent acquisition of Ohio Semiconductors, Tecumseh is now able to offer the refrigeration industry a line of proven thermoelectric devices for research and development work. We are able to offer engineering assistance in the application of either single couples or modules in prototype quantities and have the production facilities to satisfy your future requirements for these devices. Interested companies are invited to contact Tecumseh for additional information on how we can assist you in the field of thermoelectricity.

UNEQUALLED PROTECTION


Exclusive ANTI-SLUGGING device for fool-proof valve plate protection.
New internal thermostat accurately follows motor temperature, assures full motor protection

CL SERIES COMPRESSORS
CL25—rated at 30,500 BTU
CL30—rated at 38,500 BTU
CL35—rated at 43,500 BTU
CL40—rated at 50,500 BTU

WIDER SELECTION . . .
WITH TECUMSEH'S NEW CL SERIES COMPRESSOR

This 2-pole, R-22 line of CL compressors provides Tecumseh's air conditioning and heat pump customers with unmatched advantages. Dual internal protection is furnished on the 3, 3½ and 4 H.P. models (the 2½ H.P. model includes the centrifuge only) as standard equipment. With normal charge and runs, the fool-proof Anti-Slug Device prevents oil or liquid refrigerant from reaching the valve plates. The internal thermostat is built *into the motor winding* to give instantaneous and accurate sensing of motor temperature at the most critical point and therefore removes compressor from the line at a safe temperature level. Both devices are *always* operative when the compressor is running and are unaffected by outside variables. In combination, they offer compressor protection unequalled in the field. This broad line, offered to Tecumseh customers for the first time, provides a closer match to your requirements. A full year of successful field tests have proven the new CL Series your best compressor buy. Investigate it today.

forty million compressors in the field

TECUMSEH PRODUCTS COMPANY — MARION, OHIO / TECUMSEH, MICHIGAN

FOREIGN OPERATING DIVISION: Tecumseh, Michigan

CANADA: Tecumseh Products of Canada, Limited, Ashland and Wilton Avenues, London, Ontario

Experience of 800 Home Systems Guides Long Island Contractor In His Sales

By C. Dale Mericle

WEST HEMPSTEAD, N. Y.— In the past eight years Elm Air Conditioning Corp. has installed some 800 individual residential air conditioning systems in existing and custom-built homes in populous Nassau county on Long Island, so Alfred W. Wieder, who heads up sales, engineering, and record-keeping for the firm, could be considered an expert on selling in this area.

Own Sheet Metal Shop Vital for Custom Jobs

He has some interesting ideas on the subject, such as:

"There are certain firms we know we can't compete with.

"We won't touch a tract project.

"You need your own sheet metal shop for existing and custom home work.

"We bend over backwards to satisfy customers even though there are some people you just can't please.

"Lots of service troubles seem to disappear mysteriously when the first-year warranty expires and the customers have to pay for service.

"My worst competitors is the poor salesman or the firm that doesn't know how to run a business."

Using Subcontractor Wasn't Satisfactory

When Wieder started the firm in 1952 it was strictly a one-man operation. He made the sales and then sub-contracted the work. This didn't prove completely satisfactory, he found.

"The subcontractor has no personal contact or obligation to the customer, so it meant that I would have to watch the work all the time," Wieder explains.

There was also that extra profit-taking involved.

Three years later Wieder formed a partnership (a corporation actually) with Arthur Boyce, a sheet metal expert, and the firm set up its own sheet metal shop and had its own installation crews.

In this connection Wieder points out that "your mechanics have to have the right psychological attitudes, especially in existing home work where you often encounter neurotic housewives who worry about damage, dust, etc.

"We cover everything with drop-cloths and carry, as well as use, a couple of vacuum cleaners," he says.

Some price advantage is provided the firm by having its own shop and crews, and the fact that Wieder does all the selling also helps in keeping prices moderate, he says.

Despite these advantages, Wieder occasionally runs up against an exceedingly low bid.

"In that situation I suggest to the prospect that he get prices from a couple more firms who I know are legitimate, because their bids will be close to mine," he explains.

This doesn't always result in Wieder's walking off with the order, he admits, but it usually raises considerable doubt in the prospect's mind as to the quality of the job he'll get from the extremely low bidder.

Certainly, Wieder can cite numerous instances where the customer wound up being sadder and wiser as the result of taking the bid that was much too low, but Wieder is most reluctant, he says, to knock a competitor in making a sales pitch.

Many of the firm's sales come through recommendations offered from among the 800 customers, including a few that aren't 100% satisfied.

"We bend over backwards to satisfy customers," he says, feeling that this is good advertising.

"We are afraid to spend money on these jobs," Wieder comments.

He's found that even the customer who simply can't be satisfied will readily admit that the firm "certainly tried," which can prove quite an advantage in making a sale.

"What we're trying to do on every job," he says, "is give the customer even temperatures and good humidification.

"Many prospects today ask if the outside unit is noisy. I tell them that any motor makes some noise but that noise is a relative thing, like a clock ticking in a quiet bedroom at night. So I suggest they go listen to other jobs I've installed."

Concerned about Future Of Residential Field

As for future progress of the firm, Wieder is concerned and perhaps a bit apprehensive as to what may happen when the central residential air conditioning market really breaks open.

"When the mass market develops, 'hot shot' salesmen will be selling a price job," he predicts. "This won't necessarily be bad, because an inexpensive job will work fine in many houses."

The big problem will be deciding whether the standard low-price job will work satisfactorily in a particular house, Wieder thinks, "so we'll probably need 'franchised' installers as well as 'franchised' dealers."

Con Edison Offers 'Money-Back' Plan On Gas Installations

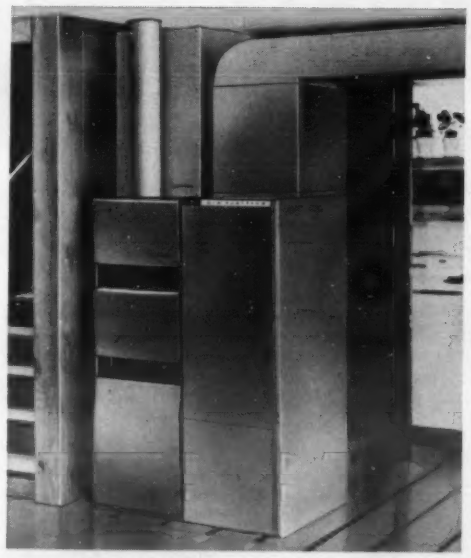
NEW YORK CITY — A "money-back" plan to try gas heat is offered by Consolidated Edison Co. to owners of existing one and two-family homes in the area it supplies with gas.

Under the plan, the homeowner may have a survey made of the home's heating needs. Then Con Edison will estimate the cost for an average year's operation. It also will determine the kind of equipment to be used and suggest the proper use of insulation, storm windows, and doors.

The owner's present heating plant is then converted to gas by a plumber-dealer cooperating with Con Edison. If heating costs for the year exceed Con Edison's estimate by more than 10%, the customer may ask the company to remove the gas heating equipment and refund the cost of it and its installation.

HOT AIR NEVER MADE

BUT NOW—the new Carrier 5-Dimension Heating Package puts the profit back in furnace sales and gives you 5 exclusive benefits to sell



The key to this 5-Dimension Heating Package is the new Carrier Automatic Air Purifier—shown on the right of the Carrier Furnace.

5•D

1. Controls Winter Humidification—
provides just the right amount of moisture all the time... never too little or too much.

2. Provides Whole-House Odor Removal—
whisks away even such smells as cabbage and stale tobacco from every room in minutes.

3. Automatically Cleans Air—
reduces dust, dirt and pollen automatically, with constant efficiency, for a healthier home.

4. Delivers Controlled Heating—
maintains a constant temperature within 2° of thermostat setting.

5. Provides for Addition of Cooling—
future installation of cooling unit is simple and economical.

Enclosed All-Weather Shopping Center Being Built In Cherry-Hill, N. J.

CAMDEN, N. J. — Ground was broken recently for Strawbridge & Clothier's fourth and largest branch store in Cherry Hill, near Haddonfield, N. J., it was announced by Turner Construction Co., the general contractor.

"Strawbridge & Clothier is a pioneer in branch store operation, and the Cherry Hill store upholds that tradition by being a part of the first enclosed all weather shopping center in the Delaware Valley, the largest enclosed center in the world, and one of the nation's ten largest shopping centers of any type," the announcement continued.

"The $20 million development will be the largest east of the Mississippi and will open with 60 stores in addition to Strawbridge & Clothier, with parking space for 4,000 cars. The ultimate plans for the center include approximately one million square feet of ground, with over 90 stores.

"Strawbridge & Clothier's store will be a 3-story structure, containing 245,000 sq ft of floor area, and will have an exterior of white brick and fieldstone. It will feature an open air dining terrace, overlooking the landscape and fountains which combine the charm of a European Arcade with the American convenience of heating and air conditioning."

George M. Ewing Co. is the architect for the project. Completion is scheduled for the fall of 1961.

Annual Membership Meeting of PHCIB Scheduled for Bal Harbour Oct. 23

BAL HARBOUR, Fla.—The third annual membership meeting of the Plumbing-Heating-Cooling Information Bureau will be held Sunday, Oct. 23, at the Americana hotel here starting at 2 p.m.

This announcement has been released by W. A. Fitzpatrick, president of the bureau, who emphasized that all members of the industry were invited to the meeting.

Fitzpatrick explained that the time and place for the meeting were selected because a large number of manufacturers, wholesalers, and others in the industry will be in Bal Harbour for the annual meeting of the American Institute of Supply Associations which starts on Oct. 24.

Fitzpatrick said particular emphasis at the bureau meeting will be placed at the meeting on the Selling Fundamentals Program.

"This program has been very successful," he stated. "So far 168 members of our industry have completed the Train the Trainer Course and nearly 1,200 have taken the course in Selling Fundamentals which is designed for contractors and wholesalers.

"The program is currently running in high gear and classes are under way in a number of cities and several are in the planning stage. With a class now under way in Denver and another projected in San Francisco, the program has become truly national."

Air Distribution Institute Moves Executive Offices

CHICAGO — The Air Distribution Institute announced that its executives offices have been relocated at 22 W. Monroe St., Chicago 3, Ill.

Formerly in Cleveland, the move was made to geographically centralize the activities of this organization, it was explained.

At a recent meeting here, G. W. Denges, vice president of The Williamson Co., was elected chairman of the board of ADI.

Other executives elected were E. J. Cullen of Inland Steel Products Co., as vice chairman of the board and J. W. Hennen of Standard Metal Fabricating Co., board member.

Denges said the institute was developing an augmented publicity and promotional program aimed at increasing the use of the products of the industry. Members of ADI manufacture metal duct, pipe, and fittings.

The institute has three basic purposes, said Denges. "For the user, the institute works to produce a better product at lower cost; for the distributor, we seek lower inventory costs through standardizing products plus greater customer acceptance; and for the manufacturer our goals are greater efficiency in manufacture and increased volume of business by better communications among the segments of our industry."

Current members of the Air Distribution Institute are:

Acer & Whedon, Inc., Medina, N. Y.; Adelta Mfg. Co., Inc., Philadelphia; Behler-Young Co., Grand Rapids, Mich.; Champion Furnace Pipe Co., Peoria, Ill.; Contractors Heating & Supply Co., Denver; Duc-Pac, Inc., East Longmeadow, Mass.; Excelsior Steel Furnace Co., Chicago; Gray Metal Products Co., Rochester, N. Y.

Henry Furnace Co., Medina, Ohio; Inland Steel Products Co., Milwaukee; Moncrief Furnace Co., Atlanta; Peerless Corp., Indianapolis; Standard Metal Fabricating Co., Omaha, Neb.; Tanner & Co., Indianapolis; Thor Metal Products Co., Syracuse, N. Y.; Wheeling Corrugating Co., Wheeling, W. Va.; Williamson Co., Cincinnati.

Parkway Plaza Shopping Center Air Conditioned

WINSTON, SALEM, N. C.—The new Parkway Plaza Shopping Center here, representing an investment of $2.9 million, held its formal opening recently.

Among subcontractors handling major phases of the work was Air Conditioning Corp., designer and installer of air conditioning and heating systems.

A FULL PROFIT

HERE'S the greatest home heating advance in years! A development so revolutionary, it makes indoor air as saleable as many features of the home that's built around it! Now, instead of take-it-for-granted air heating, you can promote the five important advantages of Carrier's new 5-Dimension Heating Package—combining the new air purifier with a new Carrier gas- or oil-fired furnace. Best of all, the package adds about *$250 to every furnace sale* and *provides a handsome, unprecedented profit margin for you.*

Is this really a hot item from the builder's standpoint? You bet it is! He's quick to realize the Carrier 5-Dimension Heating Package is the first heating system with *housewife appeal!* Fast riddance to kitchen odors. Less dusting and cleaning. Longer life for furniture, rugs, drapes. Fewer allergy reactions for her family. Reduced exposure to respiratory infections. Any one of these is reason enough for Mrs. Homebuyer to lean heavily in favor of a home with 5-Dimension Heating . . . and all together they give the builder a strong edge over his competition—just as they give you a strong edge over your competition.

So, why continue to sell "commodity" furnaces on skimpy profit margins when you can promote Carrier 5-Dimension Heating and make it pay off in both the new and replacement markets. Get the full details from your Carrier Distributor or mail the coupon now!

CARRIER AIR CONDITIONING COMPANY
Syracuse, New York

I want to restore full profit to heating system sales. Send me full details on the new Carrier 5-Dimension Heating Package.

Name_____

Company_____

Street_____

City_____

State_____

Carrier Air Conditioning Company
A DIVISION OF CARRIER CORPORATION

For Your Reprint Copy

"Emergency Diagnosis, Repair of Hermetic Unit Electric Components," by John L. Zant, mail this ad with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort, Detroit 26, Mich.
Only 25¢ each.

Utility To Supply Hot, Chilled Water for Heating, Cooling Commercial Buildings

NEW YORK CITY—A gas utility-operated central plant to supply both steam for heating and chilled water for cooling will be built in downtown Hartford, Conn. this fall, according to F. H. McGraw & Co. here, which has been awarded the contract to build it.

To cost $3 million, it will be an ultra-modern structure erected primarily to serve the commercial buildings now under construction in Hartford's $50-million Constitution Plaza.

"The central plant, a significant development in the architecture and building fields, will eliminate the need for Constitution Plaza and other new buildings in the area to provide their own individual heating and air conditioning plants," the announcement said.

"Initially the plant will have a capacity of 100,000 lbs of steam per hour which will eventually be doubled and will be equal to 6,000 boiler horsepower. Besides heating, the steam generated will operate refrigeration equipment capable of freezing 9,000 tons of ice per day to supply chilled water for air conditioning.

"To give maximum attractiveness, the architect, Charles DuBose of Hartford, will make liberal use of modern glass and ceramic products in the 200-ft-long structure, which will actually consist of two buildings connected by a walkway; one will house the boilers and chilled water equipment while the other will house the control room and offices.

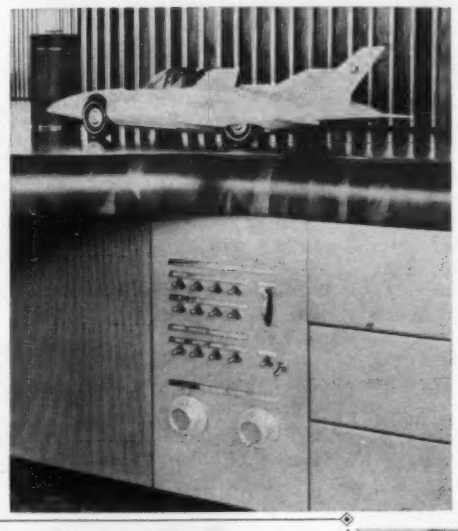
"A pumping system will be installed to supply river water for cooling the condensers."

W. T. Jebb, president of the Hartford Gas Co., said the project's construction schedule will be geared to the requirements of Constitution Plaza. Seelye Stevenson Value & Knecht of New York City are the consulting engineers.

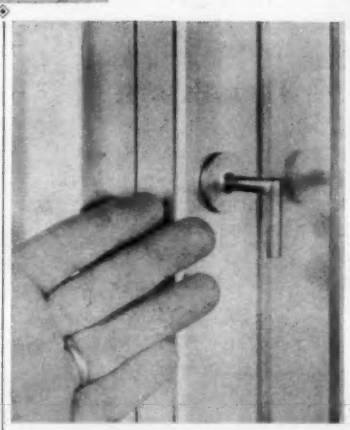
Cool Town Hall

BLACKVILLE, S. C.—Blackville's new town hall, housing a library, jail, mayor's office, council and conference rooms, health clinic, etc., has a central air conditioning and heating system. Even the jail is air conditioned.

Honeywell Develops Unusual L-Shaped Thermostats for G-M Styling Offices



DESKSIDE control console in General Motors' styling administration offices includes Honeywell temperature- controls, light switches and dimmers, curtain controls. Gleaming model on desk is replica of GM's Firebird III experimental turbine car of the future.



"INVERTED COATHOOK" thermostats were designed by Minneapolis-Honeywell to blend with decor of the styling administration offices at General Motors' technical center in Detroit. Sensitive control element is inside the inch-long aluminum tube, attached to aluminum interior wall panels.

DETROIT—Among the most unusual thermostats ever designed by Minneapolis-Honeywell Regulator Co. during its 75 years of building temperature controls are a handful of inch-long, L-shaped tubes jutting out from the walls of the styling administration offices at General Motors' new technical center near Detroit.

Because of restrictions, the firm's round thermostat could not be used. So these "thermostats of the future" were designed by Honeywell engineers to blend with the aluminum-and-cherrywood decor of the styling offices.

"To provide faster and more sensitive control, engineers put an electronic sensing element inside the 3/16-in.-diameter tube," it was pointed out. "The element reacts almost immediately to even a minuscule change in room temperature. The wall unit is linked electrically to a transducer (which controls the air conditioning system).

"Control knobs on a deskside console are used to set whatever temperature is desired. Because of large glass areas, styling administration offices are zoned, with a separate temperature-control system for each zone. Other switches on the console electrically adjust window curtains, lights, and dimmers."

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

YOU'LL NEVER MISS A SALE!

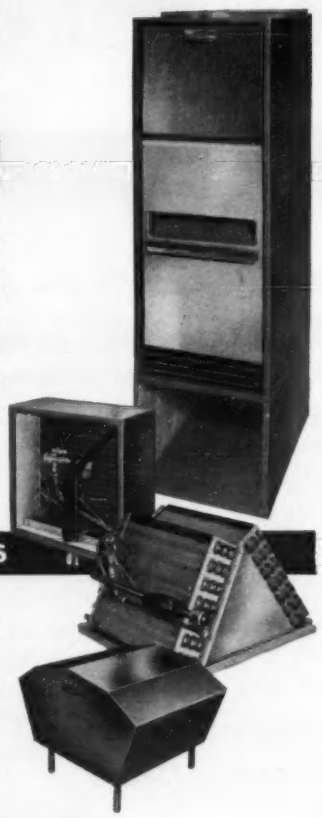
IF YOU CONCENTRATE ON THIS GREAT LINE

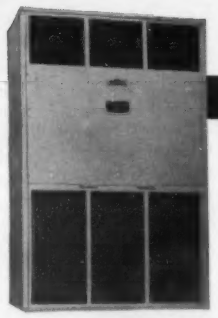
Soundly engineered products, featuring advanced designs for every type of heating and cooling equipment...built by an organization nationally famous for quality manufacturing.

HEAT PUMPS

Both indoor and outdoor sections of the Stewart-Warner Heat Pump are distinguished by advanced engineering features. The indoor section consists of a heating-cooling coil, a blower unit and an optional electric furnace for supplementary resistance heating.

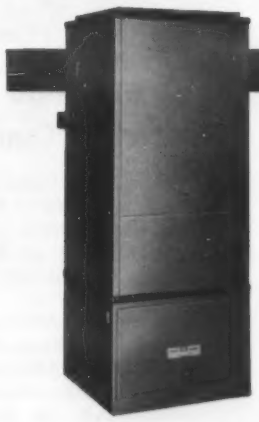
The outdoor section has numerous advantages which make it completely outstanding. It is attractive in appearance and because of the tilt-back design of the cover is the easiest unit on the market to install and service. The ingenious design of the unit also permits more effective defrosting with none of the operating defects previously so common.





AIR CONDITIONING AND HEATING UNITS

Stewart-Warner heating and cooling products for residential and commercial installation are the perfected results of years in the manufacture of home comfort equipment. You really have to see Stewart-Warner oil and gas furnaces and air conditioning units to get the full flavor of their quality design, rugged construction and distinctive styling. All furnaces are adaptable to summer cooling and a full line of store and office remote air conditioners up to 7 tons is available.



ELECTRIC FURNACES

Here is the most completely modulated electric furnace on the market! The Selective-Sequencer regulates the heat supply to *exactly* match the heat loss in mild or cold weather.

Depending upon the required capacity, the furnace section contains from 3 to 9 pairs of *sheathed* Calrod heating elements, each pair with an output of approximately 10,000 BTU/hr. The elements are controlled by the Selective-Sequencer which automatically cuts them in and out to maintain the desired heat output. This modulated operation and constant circulation of warmed air keeps temperatures uniform from floor to ceiling. 23,000—92,000 BTU/hr.

Only the Stewart-Warner Electric Furnace has this Selective-Sequencer

Write for full information on the Stewart-Warner Direct-Factory Franchise

Symbol of SW Excellence

STEWART-WARNER

HEATING AND AIR CONDITIONING DIVISION • Dept. BA-100, Lebanon, Indiana

Drug Producer's Multizone System Provides Low Installation and Maintenance Costs

COLUMBUS, Ohio—Concluding that window air conditioners did not provide adequate temperature and humidity control for its needs, the Warren-Teed Products Co., manufacturer of ethical pharmaceutical products here, installed a multiple zone air conditioning system.

The system was designed by Carl Bryson, Armstrong Furnace Co. service engineer, for Ohio Furnace Co., Columbus distributor of Armstrong heating and air conditioning equipment, and was installed by L. Bill Schull, local Armstrong dealer.

TEMPERATURE, HUMIDITY PLAY VITAL ROLE

Warren-Teed produces and processes a wide variety of capsules and tablets for national distribution to medical and allied fields. Temperature and humidity play an important role in the processing and production of coated tablets.

Warren-Teed found that many of its coated tablets could be produced much easier during cooler months when temperature and humidity averages were lower. It also found that different processing areas located on the same floor each required their own temperature and humidity control.

Bryson designed the job, totaling 63 tons of cooling, by using Armstrong 3 and 5-ton air-cooled condensing sections on the roof the building and horizontal flow, independent evaporator-blower units to provide each processing area with controlled temperature and humidity.

ADVANTAGES CITED

This multiple zone cooling installation has many advantages. Not only does the company acquire complete individual zone control with low installation cost, it is also assured of low maintenance costs.

Since each zone is cooled by its own individual system, a shutdown, in the event of repairs, will affect only one particular zone. All other processing areas will continue to function normally.

Any shutdown for repairs in a zone would be of short duration. Replacement parts can be stocked at a low cost on the job and are available for immediate replacement in the event of emergencies. Another advantage is that cooling capacity can be added to the present system as demanded.

As a result of the multiple zone cooling system, Warren-Teed is now able to process and manufacture tablets year around without fear of loss through damage caused by high temperature and humidity.

For the comfort and convenience of its employes, company offices are also air conditioned by Armstrong. Several offices are air conditioned by a single cooling section with damper control for individual offices. This allows office personnel to control temperature as they see fit.

WARREN-TEED employe at right is inspecting batch of newly coated tablets in the air conditioned processing room of the pharmaceutical products manufacturer. Note ceiling duct used for air distribution.

THREE 5-ton Armstrong air-cooled condensing units atop the plant in Warren-Teed Products Co. in Columbus, Ohio.

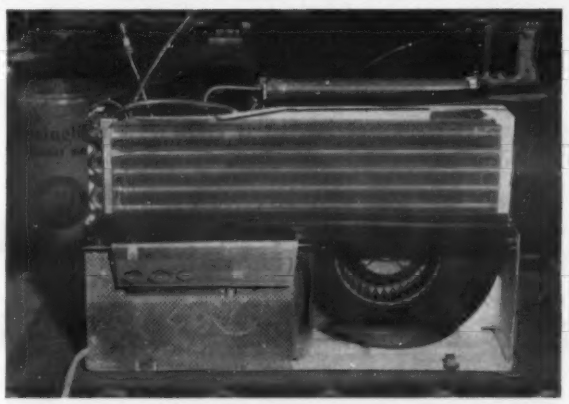
MIGHTY MITE
MOTOR PROTECTORS
SAA 3446-99
MECHANICAL INDUSTRIES PRODUCTION CO.
223 Ash Street • Akron 8, Ohio

COPPER tube for automatic return-bend machine meets rigid specifications

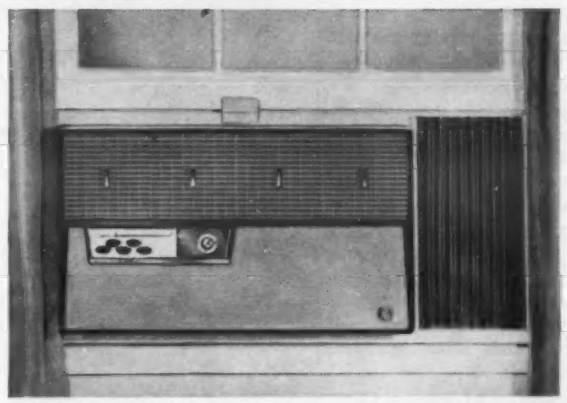
▲ **Typical return bends** formed from copper tube in the automatic machine shown at the right. Produced at high speed, these clean, uniform bends connect tubing in the condenser and evaporator unit of the Westinghouse Mobilaire Conditioner (below).

Automatic return-bend forming machine is fed copper tube, ⅜" O.D. x .017" gage. Anaconda furnishes soft copper tube of extremely high quality and uniformity required by Westinghouse. Long level-wound coils are on disposable reels. ▶

Westinghouse achieves high-speed production with precision and quality in room air conditioners



Mobilaire unit with cabinet removed to show evaporator coil. Fins are mechanically bonded to hairpin-bend, hard-copper tubing of ⅜" O.D. x .016" gage. Anaconda provides the tube in exact lengths. Tube ends are flared, return bends (above) are inserted and silver-alloy brazed to complete the refrigerant circuit.



Westinghouse has established high standards for all materials used in its line of Mobilaire Conditioners as a basis for long, dependable operation. There are four models, each featuring an adjustable mobile frame for easy installation and removal, and a mobile cart accessory for moving it as required.

QUALITY tube and creative technical services. Whether you need hard or soft thin-wall copper tube, capillary or restrictor tube, or bulb and tube assemblies, Anaconda has the experience and facilities to produce the quality tube you require for economical manufacture. For further information or technical assistance, write: Anaconda American Brass Company, Waterbury 20, Connecticut.

ANACONDA®

COPPER TUBE FOR REFRIGERATION AND AIR CONDITIONING

Anaconda American Brass Company

Outside Dope

By GEORGE F. TAUBENECK

Learn to live and laugh — thus delay your epitaph

(Continued from Page 1)

double vs. single walls, for instance—plus more middlemen and high shipping expense.

It's material, not labor, which is the big construction cost element in Hawaii.

Henry J. Bullmoose On the Loose

Fat and fabulous Henry J. Kaiser is a significant *wahine* who has "adopted" Oahu. He foresees another decade of fantastic economic development throughout the Islands, and expects to be around to enjoy it all in the 1970's.

By that time he'll be 90 "or better" (as he puts it).

Septuagenarian Henry regullarly wears out assistants half his age while directing his new projects here.

He plans — among other things — creation of a "scientific industrial park" in which he intends to enlist a wide range of creative industries.

Declares this incredible promoter:

"Hawaii is entered full blast upon a ballooning which will raise the state's population to a million people.

"This means unprecedented building of entire communities—thousands of new homes, apartments, business establishments, and expanding manufacturing and service industries."

Presently he is developing an entire resort city (Hawaii Kai) for an expected population of 75,000.

Across 6,000 acres of scenic lands which encircle Koko Head Park and Maunalua Bay, he is erecting a 20-mile marina, residential neighborhoods, motels and hotels, sandy beaches (he even imports sand), a golf course, apartment and business sections, and extensive recreational facilities.

Hawaii in the later 1960's, will be attracting one million visitors a year.

Its "vacation industry" will be the Islands' No. 1 business, and will create more employment and income than the pineapple and sugar industries combined.

"The Aloha State by the end of 1961 will triple the number of its present hotel rooms to a total exceeding 20,000. Many new Waikikis will be built throughout the Islands," predicts Henry J.

His Hawaiian Village on Oahu is master-planned for an ultimate of 5,000 hotel rooms, in which he is investing $60 million.

Kaiser also is completing a $13.5 million cement plant and limerock operation on Oahu. Simultaneously he is pushing Hawaii-produced building materials to supply the booming construction industry.

Henry couldn't possibly use any more money, but he acts as if it may go out of style next week.

Fortunes In Housing

There's more than one gold mine in the Hawaiian skies, and Henry J. doesn't have clamps on them all.

Cooperative apartments, for instance, are poking higher and higher into atmosphere hitherto reserved for coconut palms and balmy breezes. Some such are paying off like busted slot machines.

In a time when a few thousand dollars down can put you in the hotel or apartment house business, small investors are having a ball.

Two types of investors buy into co-ops; those who want to enjoy apartment living, themselves, and those who hoard an understandable and commendable urge to hatch a nest egg.

Co-op apartments come in all sizes and price ranges. Some of the penthouses would please Monaco's fastidious Princess Grace.

Others can be rented to an American Express tour visitor who'll spend a quiet five days in Honolulu on an austerity budget.

That man who carries a Teamsters' Union card next to the Hilton Carte Blanche in his wallet looks like the big future customer for the typical co-op investor, however.

Following hotels are under construction, ready now, or scheduled for completion in the near future:

Waikiki: Hawaiian Village, two units, 550 rooms; Kelley Hotels, Reef Tower, 300 rooms; additional to Reef Tower, 150; Waikiki Surf Annex, 100; Towers hotel, 40; Sheraton Hawaii, Diamond Head wing addition to Princess Kaiulani, 225; Royal Manor on grounds of Royal Hawaiian, 119; Driftwood hotel, 72 rooms, opposite Kaiser hospital.

Kalia, 150; Ebbtide Hotels, 250; Colony Surf, Colony International, 80; Aina Luana, 80; Aloha Palms, 40.

Island of Hawaii: King Kame-

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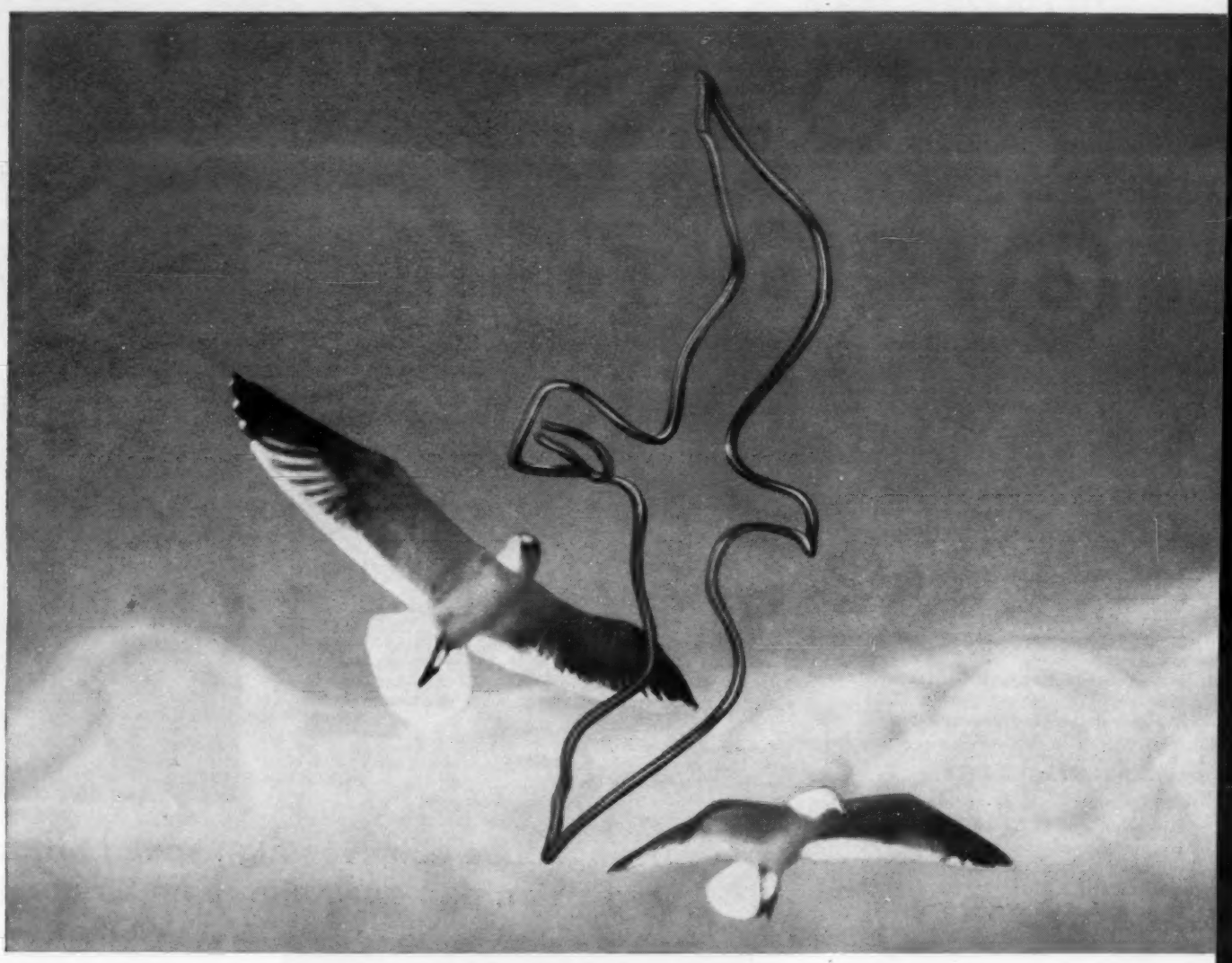
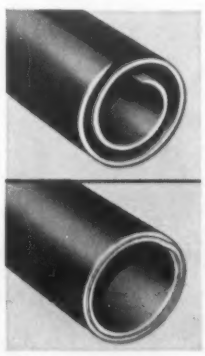


There's almost no limit to the things Bundy can mass-fabricate



Bundyweld is the original tubing double-walled from a single copper-plated *steel* strip, metallurgically bonded through 360° of wall contact for amazing strength, versatility.

Bundyweld is lightweight, uniformly smooth, easily fabricated. It's remarkably resistant to vibration fatigue; has unusually high bursting strength. Sizes up to ⅝" O.D.

Maybe you've got a tubing component that's difficult to fabricate. But complex or simple—it will still pay you to talk to Bundy. Here's why:

Your part will be made from Bundyweld—the original steel tubing *double-walled* from a single copper-plated steel strip. Extra strength and resistance to vibration fatigue have made Bundyweld the safety standard of the refrigeration industry. Meets ASTM 254; Government Specification MIL-T-3520, Type III.

And you'll get close tolerances, too. Bundy engineers check every job to see if design modifications can cut costs or improve quality. Then your component will be mass-produced on machines developed by Bundy to give you precision and uniformity – and low unit cost.

Need help with a tubing problem? Bring it to Bundy. Call, write, or wire: Bundy Tubing Company, Detroit 14, Michigan.

WORLD'S LARGEST PRODUCER OF REFRIGERATION TUBING

hameha, 105 rooms, Kona Ebb-tide, 60.

Island of Kauai: Kauai Surf hotel (Inter-island Resorts), first stage, 100 rooms; Island Holidays Hanalei, first stage, 25 units.

Island of Maui: Addition to the Wailuku hotel; Maui Hukilau, 44 rooms.

Already announced are resort projects totaling 3,448 rooms on Oahu and 722 rooms on the Neighbor Islands, including hotels, co-op hotels, and combination apartment-hotels. These include:

The 1,060-unit Ilikai and Hawaiian Yacht club, fronting the yacht basin; the 600-unit Tradewinds opposite the Kaiser Foundation hospital; the 100-unit Beachwalk Terrace hotel; a 200-room hotel on Tusitala St.; a 70-unit building on Paoakalani St., and 350 rooms at the Makaha Beach.

A 400-room addition to the 1,000 Sheraton Royal Hawaiian hotel at Waikiki, adjacent to the Royal Hawaiian; a 400-room Reef hotel addition, and the 275-room Tropic Isle hotel at Waikiki.

Co-op developers realize that there's more to running a hotel than installing a switchboard and hiring a few bellhops.

They know they're in the major leagues when they note that the Sheraton and the Western Hotel chains are setting out their own special brand of better mousetraps in the Islands.

Riches for the Modest

From all this competition the tourist is certain to benefit. It should make Hawaii even more attractive as (jargon of the trade) a "tourist destination area."

Early birds in the co-op picture are riding a gravy train. We met one young couple from Indiana who bought two small apartment dwellings in 1956 and now "own" their third apartment house (with the aid of a local bank loan).

They live in one apartment rent-free on income derived from the other two buildings. They pay $90 a month on each, get back $380 from tenants, and will be free-and-clear owners in March of 1962.

Apartment living here is best suited to childless couples, single men or women, and retirees whose children mail them snapshots of grandchildren occasionally—along with requests for small loans "to tide them over."

Most apartment buildings are situated on prime locations where few renters could afford to build private homes.

They offer carefree living (no grass to cut!) and convenient proximity to shopping, cultural, and recreation centers.

Swimming pools, roof sundecks, laundry, and recreational facilities provide added touches of luxury and convenience.

Come one, come all. It's a boom in good living!

Footnote to the Paradise Bit

Unhappiness with our jet-propelled prosperity isn't the sole property of tongue-in-cheek politicians, Harvard professors, or bearded Beatniks.

Many other citizens, surfeited with a superabundance of gadgets, gimcracks, and goodies, occasionally muse that "the pursuit of happiness" has become more of a rat race than our founding fathers intended.

Traffic snarls, telephonic harassment, frenzied togetherness, and devastating taxes seem to characterize those modern civilizations which the so-called "underdeveloped" lands are in such a hurry to embrace.

Even Americans occasionally yearn to get away from it all, and enjoy an uncluttered life in a dreamworld island paradise.

Lolling lazily under a palm tree, sipping native nectars, and being lulled into forgetfulness by balmy trade winds and undulating hula girls—this is a common daydream for brutally conformed organization men.

Tahiti, New Zealand, Fiji, Samoa, Hawaii! Fresh air and champagne, excellent food, and air conditioned accommodations! Polynesian orgies!

Hate to disillusion you, boys. Even if you could take it, you couldn't find all that anymore. Coeducational comfort stations, yes. Orgies, no.

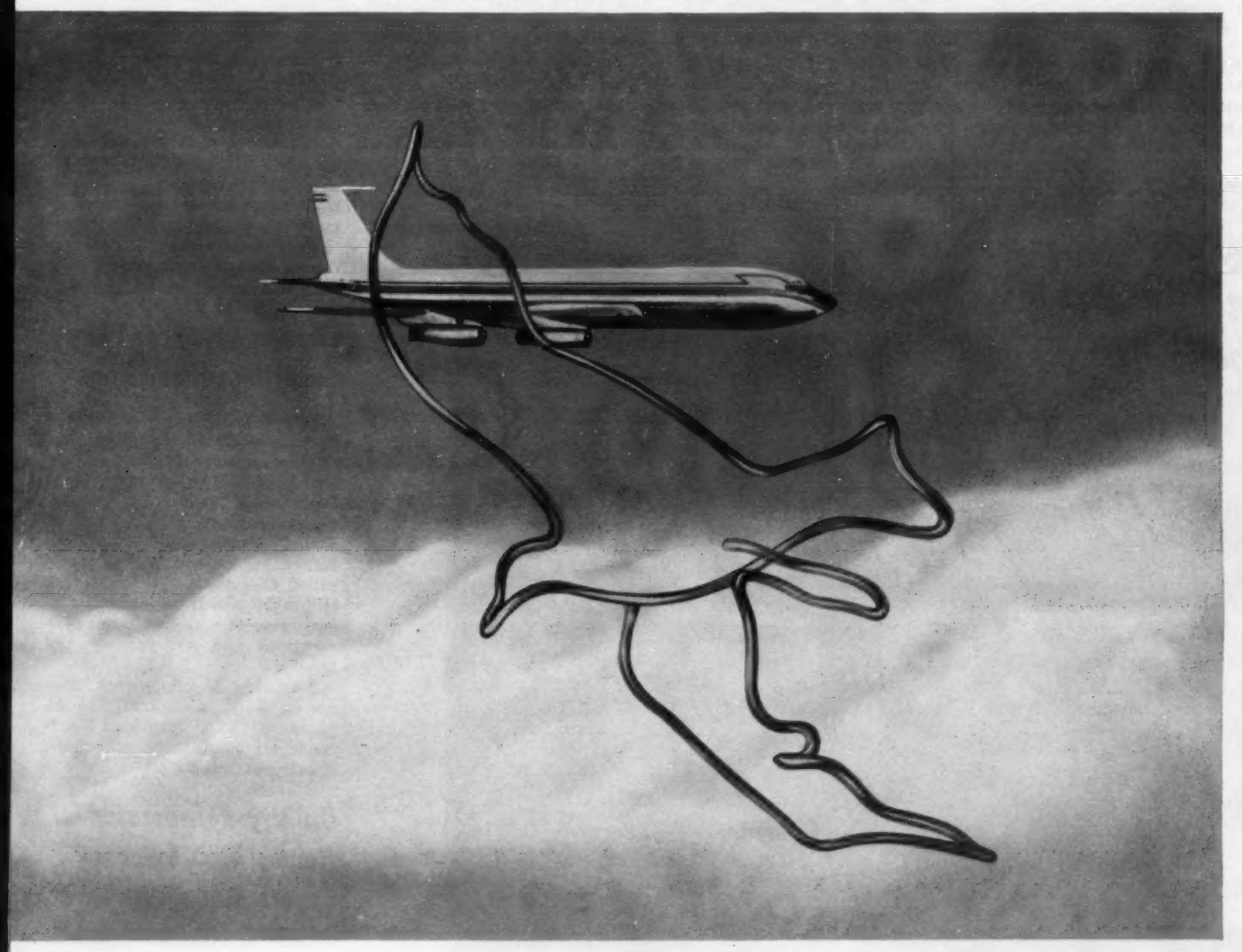
Many South Sea islanders (not Hawaiians!) do get along just dandy without television, the stock market, and space ships.

But, Americans ask themselves after looking over the situation, are tranquility and contentment a worthier way of life than ambition and competitive struggle?

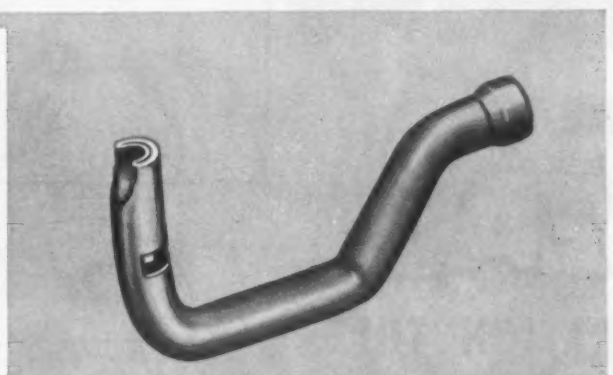
Are raucous auto horns and the hammering staccato of pneumatic drills sweeter music to American ears than a surfeit of steel guitars twanging out birdsongs?

Somehow we suspect that Americans think so—and after taking a gander at a so-called tropical paradise—return home to get what they really want.

Go on dreaming, fellow wage-slaves. It beats reality anywhere else.



Tight tolerances in bending, crimping, expanding and slotting are essential in this oil sprinkler tube for General Electric refrigerator compressors. The sprinkler slots are especially critical because they regulate the rate and direction of oil flow in lubricating and cooling vital parts of the high-speed compressor motor.



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G. F. Southland

J. G. Steeb

Whirlpool International Shifts Steeb, Southland

ST. JOSEPH, Mich.—John G. Steeb, former sales administrator for Whirlpool Corp.'s International Div., has been promoted to sales manager it was announced by R. M. Mitchell, International Div. vice president.

Steeb succeeds Gerald F. Southland who will join Whirlpool International Bahamas, S. A., as sales manager for the newly-established Eastern Hemisphere branch office.

Steeb will be responsible for sales and merchandising as administrative functions for the parent International operation in this country. He will report to Roy Erickson, manager, Whirlpool International, U.S.A.

Southland will leave Whirlpool Corp., U.S.A., to join Whirlpool International Bahamas, S. A. Headquarters for the Eastern Hemisphere office which will be Beirut, Lebanon. In addition to distributor sales responsibilities, Southland will develop sales contacts with U.S. Military buying offices throughout the European theater.

E. A. Forsyth Retires

BUFFALO — Edgar A. Forsyth has retired after long service as sales manager for the Export Div. of Buffalo Forge Co.

Overseas Firms Seek To Manufacture, Sell American Equipment—BDSA Reports

WASHINGTON, D. C.— Fraser & Borthwick, Ltd. of Glasgow, Scotland, would consider the manufacture of any type of electrical or electromechanical equipment, either industrial or domestic, including domestic air conditioning units, according to a recent announcement of the Business & Defense Services Administration, U. S. Dept. of Commerce.

The company would operate under license to an American firm which would supply drawings, constructional, operating, and technical know-how in return for royalty payments.

Fraser & Borthwick would supply the manufacturing plant plus the necessary new production machinery and a sales organization covering Scotland and parts of England.

The BDSA also reported these other export trade opportunities:

Santos, Guimaraes & Oliveira, Lda., 523 Rua de Sa da Bandeira, Oporto, Portugal, is interested in importing and representing an American manufacturer of home air conditioning equipment.

A joint-venture enterprise for the manufacture in India of refrigeration compressors is proposed by the firm, Bhawani Prasad Girdhari Lal, Girdhari Bhawan, Hotia Bazar, Kanpur, Uttar Pradesh, India.

The Indian firm proposes initially to produce 100 compressors a year on a one-shift basis at Kanpur, Uttar Pradesh. A full-production capacity of 500 more compressors a year is envisaged as a second phase of the operation.

A partnership concern established in 1918, the firm and its associates are said to be sole selling agents of various Indian textile and woolen mills. The firm now seeks U. S. collaboration, mainly in the form of technical know-how, for the manufacture of compressors, with plant and equipment, if any, to be provided by the American company.

DEEP Freeze Central Africa (Pvt.), Ltd., P. O. Box 1418, Salisbury, Southern Rhodesia, Africa, a manufacturer's representative, is interested in an agency for freezers 4 to 25 cu ft, ice cream conservators, bottle coolers, combination upright refrigerator-freezers, and equipment for refrigerated vehicles, particularly systems operated hydraulically and mechanically from truck engines.

The firm is also interested in handling all types of air conditioning equipment, refrigeration machinery, controls, copper tubing, etc.

Ethiopia, Nigeria Plan Conditioned Buildings

WASHINGTON, D. C.—Plans for air conditioned buildings in Ethiopia and Nigeria were noted recently by the U. S. Dept. of Commerce.

Development & Hotel Co. of Ethiopia plans a $4.8 million, 250-room, air conditioned hotel called the Addis Ababa Hilton. Hilton Hotels International will supervise the design and construction and will manage the hotel.

Northern Developments (Nigeria), Ltd., in central Kaduna plans a $3.5 million, eight-story air conditioned office and apartment building.

Utilitity Refrigerator Names Mrs. Sweeney Export Manager

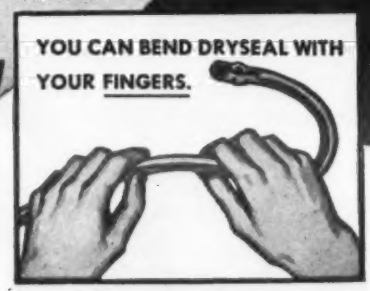
LOS ANGELES — Appointment of Mrs. Evalyn Sweeney as export manager of Utility Refrigerator Co. here has been announced by Bernard J. Chapman, general manager.

Mrs. Sweeney

Mrs. Sweeney has been associated with Weber Showcase & Fixture Co. for the past 16 years, the last five as manager of the Export Div.

Chapman said Mrs. Sweeney's extensive experience in the commercial refrigeration field, combined with the many recent additions to the 29-year-old firm's already extensive line, will create rapid expansion of its export department.

REPRINTS SELLING FOR PROFIT.
By Frank Klein—Only $1.00 ea. Clip this ad and mail with your name and address to: Air Conditioning, Heating & Refrigeration News, 450 W. Fort St., Detroit 26, Mich.



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It's a dead cinch to bend dead-soft DRYSEAL. Your hands are all you need, even for the most intricate bends. And its ductility and special temper make it extremely easy to flare for compression fittings without danger of splitting.

And to make sure you get a tube that is free of even the slightest trace of dirt or moisture we double crimp DRYSEAL on both ends, at the factory. This is the final step in manufacturing, that immediately follows a special cleaning and dehydrating operation, which keeps dirt and moisture from entering the tube. That's why the inside of DRYSEAL shines like a new penny. This double crimping does not interfere with installation for it is made in such a way that the diameter of the tube does not change, permitting DRYSEAL to be passed through any opening large enough for the tube itself. Economical tube sizes range from ⅛" to ¾" O.D.

Also you'll find the job-size, 50-foot one-coil pack easy to handle, light weight, economical and sturdily made to assure protection of the tube.

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Distributors Everywhere.

Sheet Metal Group Plans 50th Meeting

ATLANTIC CITY, N. J.— Fiftieth anniversary convention of the National Association of Sheet Metal Distributors will be held at the Dennis hotel here Oct. 16 to 18.

A joint session is planned for Tuesday, Oct. 18, with the National Wholesale Hardware Association, holding its 66th annual convention here at the same time.

Committee meetings and a reception are scheduled for Oct. 16. Annual meeting of the sheet metal group, which is planned for Monday, Oct. 17, will include the following discussions:

"Office Billing Procedures and Machines," by Clayton E. Caddy, Kinsner Supply Co., Cleveland, and J. H. Wilkinson, Greensboro, N. C.

"Complete Fire Protection," by Roger K. Becker, Ohio Valley Hardware Co., Inc., Evansville, Ind.

"Inventory Control Systems," by A. B. Lewis, Palmer-Donavin Mfg. Co., Columbus, Ohio.

"Training Our Personnel," by Norman Herr, Bayonne Steel Products Co., Newark, N. J.

"New Products and Methods," by Orin J. Lockwood, Jr., Binghamton Hardware Co., Binghamton, N. Y.

"Evaluating RDMI for the Distributor," by S. M. Van Kirk, Roof Drainage Manufacturers Institute, Chicago.

Three talks are slated for the joint meeting Oct. 18:

"Role of the Distributor in the Metal Industry," by Archer W. P. Trench, publisher, American Metal Market.

"Checking the Integrity and Honesty of Employes," by Norman Jaspan, New York City.

"Creative Thinking Can Improve Your Entire Company and Personnel Outlook," by Dr. Bernard B. Goldner, LaSalle college, Philadelphia.

As '61 Models Bow

Frigidaire Calls 525 Employes Back to Work

DAYTON—Frigidaire Div. of General Motors Corp. announced recently that the recall of 350 employes now under way will be extended to 525.

"Present sales trends in our business warrant bringing back an additional 175 of our people," said Herman F. Lehman, GM vice president and head of Frigidaire.

The division's 1961 room air conditioners, refrigerators, food freezers, and free-standing electric ranges will be introduced this month. They will be shown at the General Motors "Motorama of 1961" which opens at the Waldorf-Astoria hotel in New York City on Nov. 3.

Tecumseh Forms Canadian Div.

TECUMSEH, Mich. — Tecumseh Products Co. announced that all sales in Canada will be handled by its newly-formed division, Tecumseh Products of Canada, Ltd.

To assure complete facilities for both present and future customer requirements, a building was purchased which has approximately 40,000 sq ft of floor area, it was stated. The new address is 185 Ashland Ave., London, Ont.

"Tecumseh sales in Canada have been effectively handled by Refrigeration Supplies Co., Ltd. for many years," the announcement said, adding that the firm has done "an outstanding job in serving the Canadian market.

"The change to a separate Tecumseh division reflects the rapid growth in the sale of Tecumseh products in Canada," it was stated.

J. A. Cowan, who was formerly with Resco, was appointed a vice president of Tecumseh in charge of the Canadian division.

BHCB Efforts to Raise Installation Standards Praised by Detroit Mayor

DETROIT — Efforts of the Better Heating & Cooling Bureau to raise the standards of warm air heating installations in the Detroit area were praised recently by Detroit Mayor Louis C. Miriani.

In declaring the week of Sept. 25 to 30 Better Heating and Cooling Bureau Week, Mayor Miriani urged the bureau, comprising some 250 heating and cooling contractors, to continue its efforts to upgrade the industry.

"I prefer to see industry do its own policing rather than then city doing it for them," he declared. He added encouragement of the bureau's efforts to get a heating contractor licensing code adopted.

"A code is just a standard," he observed, "and not the best standard either. Better codes pay off."

At the luncheon kicking off the "Week," George Asher, executive secretary of the bureau, cited the bureau's record. In its three years of existence, the bureau has received and investigated 500 homeowner complaints about poor heating systems.

"In each case, the complaint was taken care of at no charge to the homeowner," he asserted.

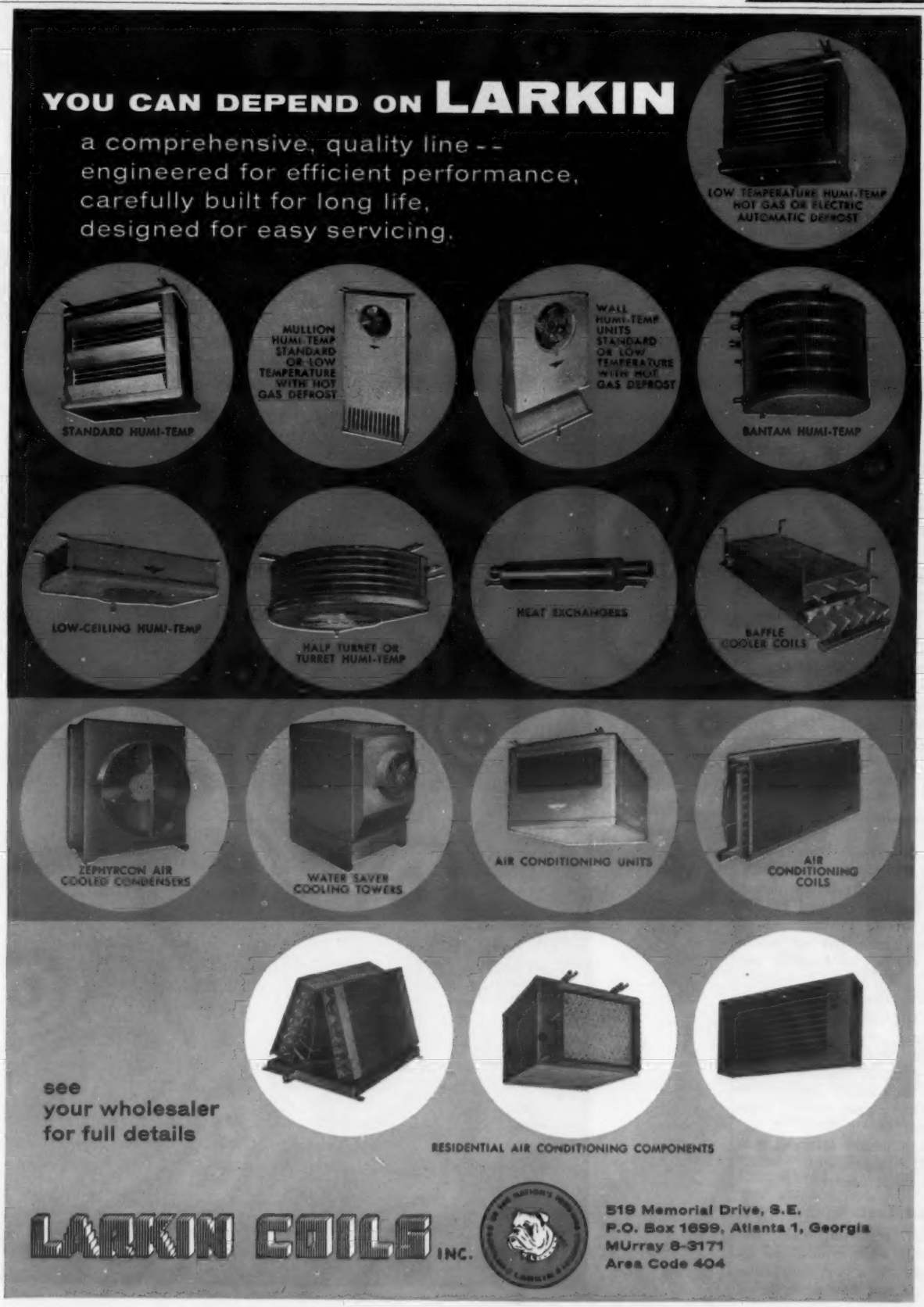
Asher added that the bureau had made 3,000 inspections of heating systems in homes at the request of homeowners or local heating inspectors.

He said that 30,000 BHCB guarantee certificates have been placed on furnaces installed in the Detroit area. The certificate tells the homeowner that BHCB guarantees that his furnace has been installed according to the bureau's own code. Bureau members are pledged to make all installations in accordance with this code.

Charles Strand, new chairman of the board of trustees of the BHCB, announced that the bureau would continue its efforts in the coming year. If possible, he said, more emphasis would be placed on getting its code adopted by municipalities and on advertising to make the public aware of BHCB contractors.

Asher announced that two Detroit heating wholesalers have recently added their support to bureau activities.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.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BANTAM HUMI-TEMP
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HALF TURRET OR TURRET HUMI-TEMP
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Self-Contained Hot Water Radiant Panel Baseboard Is Heated by Electricity

Inventor Seeks Manufacturer

AUSTIN, Minn.—A patented electrically heated hot water radiant panel baseboard radiation system for home heating has been developed and field tested by Herald J. Williams, Jr. here.

Williams is seeking a manufacturer to take over his patents and produce the unit. It is ready for production, he said.

"Called "Aqua-Lectric®," the system is comprised of cast iron baseboard radiation, heat producing submerged type electric elements, and controls.

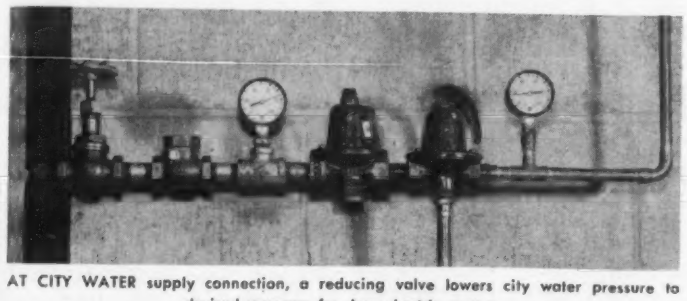
The system is claimed to produce 640 Btu per lineal foot using 200 watts of 220-volt electricity per lineal foot. Williams said that a test unit in a home here averaged a cost of less than $1.04 per day between Sept. 2 and May 1.

"Our electric cost is not cheap in this area, so we feel we have a good system," Williams asserted.

Aqua-Lectric is assembled in units of up to 10-ft. lengths, he said. Height is 10 in. and width 2 in. Each section is self contained. There is no flow of water between sections. Each unit has its own control and each area is controlled by a thermostat.

7-FT UNIT OF patented electrically heated hot water radiant panel baseboard with covers removed shows electrical and water connection.

2-FT AND 10-FT SECTIONS show how baseboard matches up at corners.



AT CITY WATER supply connection, a reducing valve lowers city water pressure to desired pressure for Aqua-Lectric system.

Unit Described

Describing his unit, Williams said, "We assemble the radiation as usual and to the length we desire up to 10 ft. Next we insert our electrical element through the bottom tapping and on through the nipple ports. As the element is the same length as the radiation, we have element the entire length of the radiator.

"We insert in the upper tapping a well to receive our high limit control bulb. On the opposite end we install in the upper tapping an automatic air vent. In the lower tapping we install our fill piping fitting.

"Installation is the same as in conventional hot water system, except that we do not have a boiler, pump, distribution piping, or accessories.

"After units are installed in various locations in the house, we connect a ¼-in. o.d. copper tubing to each unit. This is connected to a water supply source. A reducing valve reduces water pressure to that desired in the heating system. Turning water on fills the units, the air vents relieving air out of each of the units.

"After connecting electrical power to the units and the control system, we can produce heat. Heat produces expansion. To take care of this, we have installed a small expansion tank in the copper tubing supply system."

Controls include Minneapolis-Honeywell thermostat, relay, and high limit control.

Report on Tests

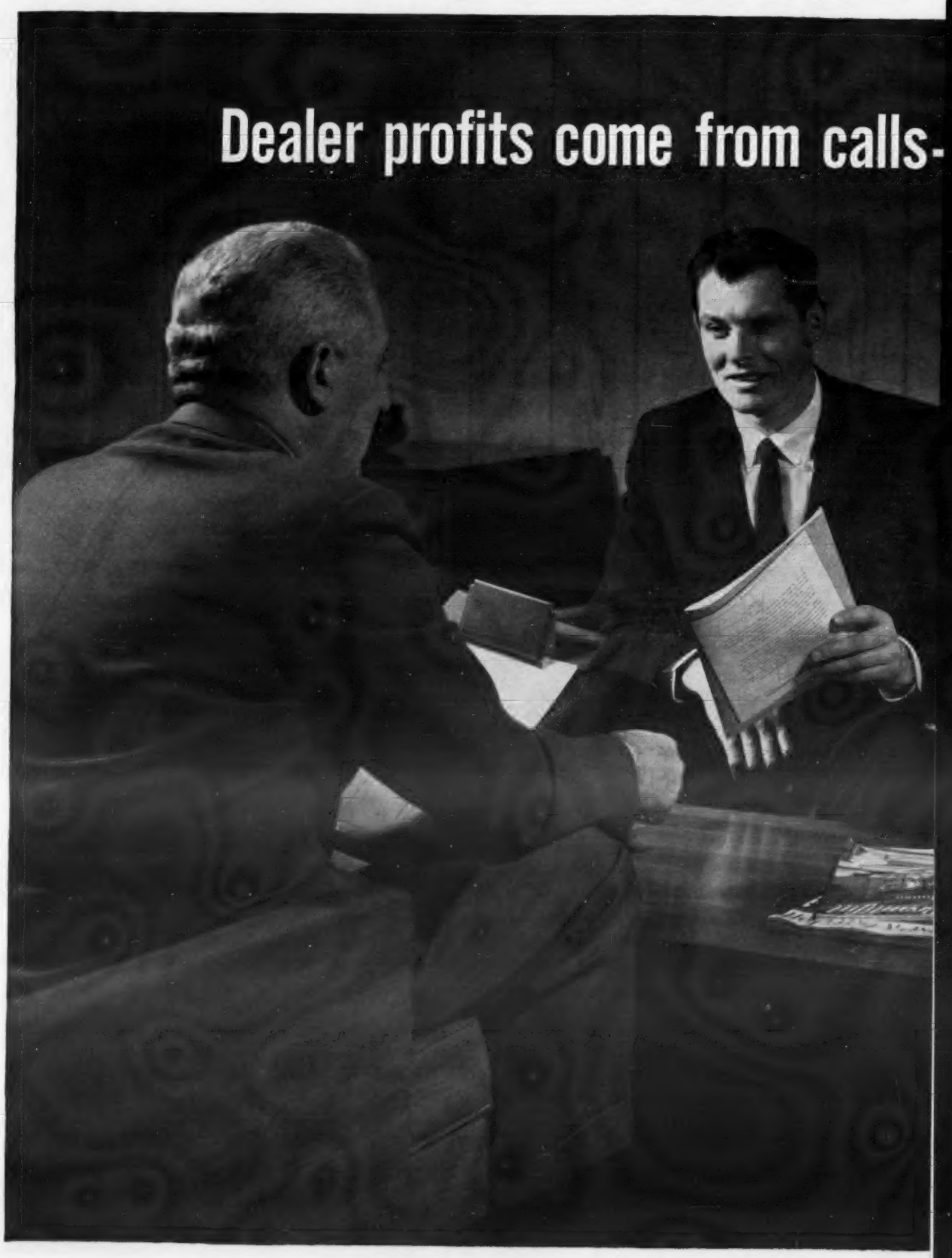
Williams reported that capacity tests were conducted by an outside firm to determine whether or not the absence of forced water flow in the baseboard would have any appreciable effect on the capacity as compared to that obtained with the conventional I-B-R test with a 500 lb./hr. flow rate.

Test report concluded, "I-B-R rated output is maintained with the Aqua-Lectric system. However, rating must be based on water temperature not exceeding the high limit control setting (190°F)."

It added: "Performance tests show very precise temperature control is obtained when controlled by the thermostat at a fixed setting.

"The Aqua-Lectric system produces uniform temperatures in all parts of the baseboard panel.

"There is no temperature drop in the length of the panel, as occurs with forced circulation."



Thermostatically Controlled Baseboard Diffusers

Regulate Temperature of Each Room While Automatically Keeping Balanced Duct Pressures

MILWAUKEE — Thermostatically controlled baseboard diffusers, for use with perimeter warm air heating and cooling systems, that regulate the temperature of each room while automatically maintaining balanced duct pressures were demonstrated in a model of the 1960 Milwaukee Parade of Homes.

The "ROOM-temp" diffuser is made by Control Systems Co., here. (It was described on page 44 of the March 7 issue of the NEWS). Manufacturer's claim is that it saves fuel and permits smaller size air conditioning equipment.

Each diffuser has a damper operated by a thermostatically controlled, 24-volt electric motor. Thermostat and transformer are connected to the diffuser with low voltage wiring.

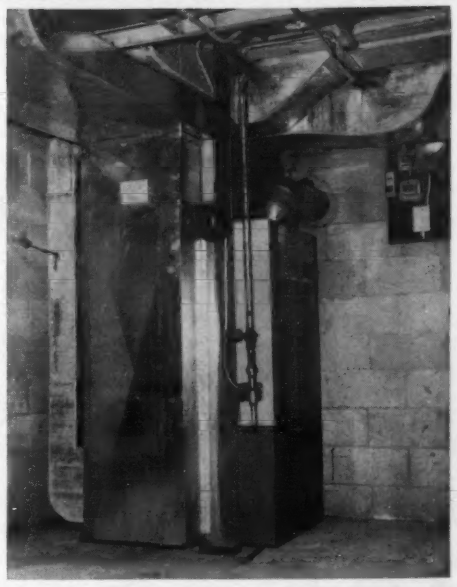
By-pass dampers between the supply and return air plenums automatically balance duct pressures to assure a constant volume of air.

At the model home, a check at the diffuser showed an air velocity of 500 fpm. Satisfying the thermostats in all rooms except that closest to the heating and air conditioning unit failed to increase the air flow at the open diffuser by any noticeable amount, it was reported.

ROOM-TEMP thermostatically controlled baseboard diffuser.

For cooling, a small damper in the diffuser operates manually to increase air velocity, it is explained.

Even though cooling load requirements indicated a 5-ton air conditioner in the model home, a 3-ton model was installed and apparently did an adequate job.



BY-PASS DAMPER (left) between supply and return air plenums automatically balance duct pressures to assure a constant volume of air. System is said to save fuel and permit smaller size air conditioning equipment.

H. O. McDowell, Jr., owner of control systems, commented that to get the fuel savings claimed, the homeowner is expected to reset the thermostats in rooms not being used.

McDowell saw his ROOM-temp unit as the answer to "trouble" jobs.

"In cases where trouble is experienced in overheating or cooling in only one or two rooms, our units in those rooms will usually take care of the program and tend to balance the system," he said.

"In most cases, using ROOM-temp units throughout will automatically balance systems that have been poorly designed and undersized," he added.

Add-on units are available for increased cfm capacity for commercial applications, he said. Additional duct and electric zoning units will be available shortly, he added.

-not call-backs!

It's surprising what heating and air conditioning manufacturers can learn when they're willing to roll up their sleeves and work side by side with the most important man in the business: you, the dealer.

Close Lennox cooperation in the field resulted in the finest sales and service schools in the industry. This policy enables *your salesmen* to share experiences . . . improve their selling techniques . . . learn to close more sales, faster. And your installers become more expert in making installations right the *first* time (without profit bleeding follow-up calls and make-over work).

If this partner-like relationship has been missing from your operation—it's time to call your nearest Lennox factory for the eye-opening story.

LENNOX *World leader in indoor comfort for home, business, schools*

Lennox Industries Inc. founded 1895 • Marshalltown, Iowa • Columbus, Ohio • Syracuse, N.Y. • Fort Worth, Texas • Salt Lake City, Utah • Decatur, Ga. • Los Angeles, Calif. • Des Moines, Iowa • Lennox Industries (Canada) Ltd. • Toronto, Montreal, Calgary and Vancouver

Memphis Is Tenth Silver Shield City

MEMPHIS — The nation's tenth Indoor Comfort Bureau licensed to operate the Silver Shield program of the National Warm Air Heating & Air Conditioning Association will be launched here Oct. 12 at the Peabody hotel.

Arrangements are being made for upwards of 500 people to attend the dinner-meeting that will feature U. S. Housing Administrator Norman P. Mason of Washington as the principal speaker.

R. B. Buckingham is president of the new bureau.

The week of Oct. 9 through 15 will be declared Silver Shield Week in Memphis by Mayor Henry Loeb. And the new Indoor Comfort Bureau will sponsor a number of other special activities in conjunction with the inauguration of its program.

Memphis will be the second city in Tennessee to start the program, being preceeded by Nashville.

Numerous dignitaries will travel to Memphis for the kick-off dinner-meeting from throughout the United States, it was pointed out. Also, cooperative participation by the Memphis Home Builders Association is being arranged, according to Jim Wood, president of that group.

They'll Do It Every Time

by

Jimmy Hatlo

INSIDE THE STORE, SQUARE JAKE, THE GROCER, DOES EVERYTHING HE CAN TO BUILD UP GOOD WILL IN THE NEIGHBORHOOD...
THE LUSHWELLS HAVEN'T PAID A DIME ON THEIR BILL FOR OVER TWO MONTHS—SHOULDN'T WE CUT OFF THEIR CREDIT?
NO—HE'S BEEN OUT OF WORK.... CARRY 'EM FOR A WHILE—WE GOTTA KEEP FRIENDS WITH EVERYBODY—BY THE WAY—LET'S ORDER SOME LOLLIPOPS FOR THE CUSTOMERS' KIDS...
WHILE ON THE OUTSIDE, THE COWBOY WHO DRIVES HIS DELIVERY TRUCK MAKES THE STORE'S NAME POPULAR—YEAH—AS POPULAR AS ASIATIC FLU—
SQUARE JAKE'S GROCERY
JIMMY HATLO
THANK AND A HAT TIP TO MIKE GUENTERT, 545 SO. FIRST ST., COVINA, CALIF.
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7-5

Let's Quit Selling the Steak and Sell the 'Sizzle'

(Continued from Page 1)

Comfort, you see, is a passive thing. It does not connote Prestige or Personal Improvement. To many, a desire for comfort implies somebody who isn't on the ball, who lacks ambition, who is lazy.

Women especially have this feeling. It drives them nuts to see a man loafing around the house (some predict that a four-day week, as sought by Walter Reuther, will up the divorce rate).

By the same token they don't spare themselves.

That's why the electric dishwasher, which probably is the most useful of all home gadgets, never has sold well.

Women simply don't want others to believe that they are coddling themselves, or taking life easy.

Inasmuch as women rule the roost when purchases for the home are concerned, it seems obvious that makers and sellers of residential air conditioning need a new sales approach.

Comfort in itself just won't do.

Fortunately, there ARE three excellent, solid, useful sales appeals which residential air conditioning salesmen can employ. These are the "sizzles" which can turn the trick:

1. HEALTH.
2. CLEANLINESS.
3. APPEARANCE.

Let's consider them in reverse order.

Lennox, which is one of the most successful residential air conditioning sales organizations on earth, not only invented the "personal appearance" approach but has been practically alone in using it.

Here's the pitch: heat and humidity unravel beauty parlor hair-dos, they ravage cosmetics; they turn perfume into B-O, and they unhinge The Lady's serene outlook on life.

It is true that air conditioning preserves and enhances beauty and feminine charm. Lennox has proved that this sales appeal works.

Cleanliness comes up next. With the Little Woman, cleanliness may be the most absorbing occupation of her life.

Most of her days she spends cleaning—clothes, rugs, drapes, walls, runny noses, backs of hands, etc., etc., etc.

Again, it can be proved that air conditioning is the greatest invention ever to assist accomplishment of Mrs. Mama's ideal of a perpetually clean home.

Its filtered, tempered air prevents grime, dust, and decay. Rugs, drapes, furniture *stay* clean. Clothing, too. For Mrs. Mama this is a real boon.

Mind you, air conditioning doesn't help her "take life easy" in this respect. It aids her to achieve what hitherto was an impossible goal.

Last but foremost is HEALTH.

Although her APPEARANCE is close to her heart (she spends a lot of time and money to be glamorous); and although CLEANLINESS occupies most of her working hours, fundamentally the HEALTH of her husband and children really is most important to her.

Hubby not only is the provider; assumably she loves the guy. And anyone who's ever watched an anxious mother hover over a sick child has seen supercharged emotion and devotion.

Nearly all communicable diseases—those which strike especially against children—are airborne. Filtered and tempered air conditioning can alleviate them, make them less common.

Air pollution is a prime cause of cancer, heart failure, tuberculosis, and many other killers.

Filtered and tempered air conditioning is a prime defensive weapon against these spectres.

If Mrs. Mama doesn't go for these true sales appeals, Mr. Residential Air Conditioning Salesman, you've lost your touch.

Don't sell the steak, sell the sizzle!

Don't sell comfort. Sell beauty, cleanliness, and good health!

Our problem is to remain venturesome and experimental without making complete fools of ourselves.—BERNARD BARUCH.

The less a thing can be proved the angrier we get when we argue about it.—*Ethical Outlook.*

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AIR CONDITIONING HEATING & REFRIGERATION NEWS

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F. M. COCKRELL, *Founder*

'The Conscience of the Industry'

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VOLUME 91, NO. 6, SERIAL NO. 1,646, OCTOBER 10, 1960

From the Files of the News

25 years ago . . .

A new table of allowable pressures on refrigeration systems for various refrigerants has been issued by the Bureau of Safety Engineering, Detroit, and relief valves on systems containing the above refrigerants shall be set accordingly and the set pressure permanently stamped on the valve body. . . . Square D Co. is entering the refrigeration controls field with a line of pressure and temperature controls featuring overload protection.

Improper cooling is blamed by a well-known brewer for customer complaints of "too lively" or "too flat" beer, the brewer suggesting that manufacturers of refrigeration equipment encourage refrigerated installations for cooling beer at a consistent level. . . . The 22nd annual factory sales course conducted by York Corp. opened last week for 34 "students" selected from 24 leading colleges throughout the country.

A "Handy Reference Table to Remedies for Motor Troubles" on motors used in electric refrigeration was prepared by Wagner Electric Co. and published in the NEWS.

The importance of care and maintenance of switch contacts on electrical control equipment was stressed in an article supplied by Allen-Bradley Co.'s engineering department. How new design features have simplified operation and care of controls was explained in an article by G. E. Graff, Ranco Div., Automatic Reclosing Circuit Breaker Co.

10 years ago . . .

The new 10% manufacturers excise tax on food freezers is currently puzzling manufacturers who must decide whether the customer or the distributor should absorb this additional expense. . . . A new priorities system designed to make sure that defense production has first call on the nation's production capacity will definitely affect production of durable goods; one manufacturer felt that the situation is "bound to wind up with all-out allocations."

Competition for the consumer's dollar is hitting the restaurant business, yet one out of four restaurant executives says he is doing nothing to increase business. . . . To handle a "turn-key" job for a restaurant, the dealer must be prepared to take on the whole job, and should set up a separate department for this business and staff it with specialized salesmen, said Frank D. Stella, president, The F. D. Stella Products Co.

A completely air conditioned community shopping center which houses a supermarket, drugstore, retail bakery, and beauty salon was opened in Lincoln, Neb. The air conditioning system was installed in the balcony of the supermarket. . . . Keys to preventing moisture from condensing on building walls during winter was discussed in an answer to a question from a reader. . . . Package air conditioners provide satisfactory conditions in a printing plant and in an egg hatchery in installations made in Holland, Mich. by Charles Conrad.

60 years ago . . .

From the RECOLD MUSEUM

These 50-to-60 years ago items are from the Recold Museum Library, maintained by Hy Jarvis, Recold Corp. president.

Matters have been rotten since gold and diamonds were found in the streets of South Africa. In the next 10 years the eyes of the world will be centered on Africa. But living conditions for the outlanders are wretched. One of the reporters on the scene, Rudyard Kipling, has cried out about the dearth of refrigeration facilities. He says cold storage for fruit preservation should be built in this land by the acre. "And chilled fruit cars," says Kipling, "should be as common as cattle trucks."

FARM EDITORIAL VIEWED AS MOST TIMELY

Portland Fixture Co.
Portland, Ore.

Editor:

Having been a subscriber to your fine publication for many years who reads each issue from cover to cover, I believe it is time to let you know how much your newspaper is appreciated. Your editorials are exceptionally good and cover subjects that should be of concern to every American.

Your recent editorial on the "insane" farm program was most timely and undoubtedly got the idea across to some who have never paid much attention to the farm debacle.

If you ever come to the Portland area, I should like to extend an invitation to you to address the Executive's Association at one of our Thursday noon meetings, for I am sure that all of the 130 members would enjoy hearing your view on current events.

If you anticipate being in this area at any time and would be willing to address this group, please advise me in advance in order that arrangements may be made well in advance.

Wishing you continued success, I am

EMERY E. WILSON

LIKES STRONG STAND ON CONSERVATIVE SIDE

Cross & Shriver
Baltimore, Md.

Editor:

I recently became acquainted with AIR CONDITIONING, HEATING & REFRIGERATION NEWS because some clients of mine purchased Warren Webster and I am general counsel.

I thoroughly enjoy your column but thought I should take the time to write you particularly about the one in your Sept. 19 issue.

It is so rare these days that an editor of a business publication will take a position on the conservative side. Usually articles written in such publications take firm stands, but the editor pussyfoots a bit. Your comments on Galbraith and Schlesinger were fascinating and hard hitting.

Incidentally, did you happen to see "Economic News" published by American Institute for Economic Research, for September 1960? Galbraith's book is reviewed in that issue and it is a fascinating support for the position taken by you, and interestingly enough the "Economic News" and your publication for Sept. 19 arrived in the office the same day.

J. NICHOLAS SHRIVER, JR.

ASSOCIATION DIRECTORS APPRECIATE FINE WORDS

San Antonio
Home Builders Assoc.
San Antonio, Texas

Editor:

Mr. Marshall Webb of Marshall Webb Co., San Antonio, just sent to me an editorial from a recent issue of your NEWS entitled "Let's Doff Our Hats to an Indispensable Man—the Harassed Association Manager."

I would appreciate very much receiving about six copies of this editorial if it is possible. My congratulations to you on this editorial.

W. S. HALE, JR.,
Executive Vice President

* * *

National Institute of Locker And Freezer Provisioners
Elizabethtown, Pa.

Editor:

Thank you, Mr. Taubeneck....

For the wonderful editorial about trade association secretaries in the Aug. 22 issue of your topnotch publication. You've summed up the situation knowingly, realistically, and sympathetically, and we're grateful to you for speaking out so eloquently in our behalf!

ROBERT L. MADEIRA,
Executive Director

* * *

Air-Conditioning & Refrigeration Institute
Washington, D. C.

Editor:

Wonderful. . . !

GEO. S. JONES, JR.,
Managing Director

KNOWING LANGUAGES AIDS OVERSEAS STUDY

Nuova San Giorgio S.p.A.
Genova-sestri, Italy

Editor:

Your letter of June 20 was forwarded by my secretary in Washington and reached me just as I was leaving for Naples, Rome, La Spezia and back by way of Genoa, so this is my first opportunity for a reply which, will likely be too late for use in your World Trade Issue. This, by the way is an excellent issue and I had my copy with me last year aboard the ship on which I came over.

I have made quite a study of the Heating, Ventilating, and Air Conditioning industry of Italy during the past year as well as that of England, the Scandinavian countries and the continent during prior years during which I spent about 3 months of each year abroad. It is difficult to obtain real facts without living here, speaking the language and working with natives. As I speak, read, and write German and French and have many contacts in both countries, I do not find Italian too difficult, but it is not easy.

THOMAS H. URDAHL,
Consulting Engineer

SALES ENGINEER LIKES NAPC CONTRACTOR STAND

Schnacke, Inc.
Evansville, Ind.

Editor:

Three Cheers for N.A.P.C. concerning qualified contractors, as listed in the Aug. 15 NEWS.

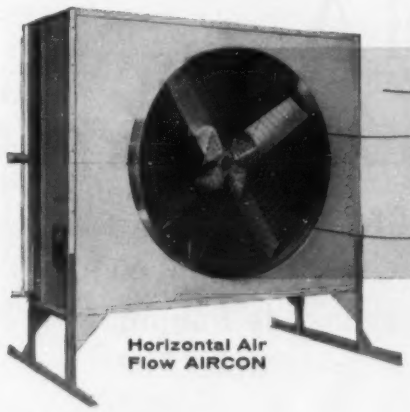
We believe this could be a big help to the owner, the engineer, and the manufacturer, especially in the field of refrigeration and air conditioning. Too many times the owner, the contractor, and the engineer looks to the manufacturer when the mechanical work was not properly installed and serviced. With N.A.P.C.'s Resolution, it would give the Industry less headaches and increase its prestige.

This would also let the architect decide if the contractors were competent.

R. W. JAMES,
Sales Engineer

McQUAY heavy duty, air cooled Aircon condensers are constructed to give complete, dependable operation for either refrigeration or air conditioning —or both. They are available in horizontal or vertical air flow models in 13 sizes from 8 to 85 tons nominal capacity in a single unit. Unlimited capacity is available in multiple unit installations. The low profile, quiet operation, flexibility and the economy in installation and operation make the McQuay Aircon ideal for every installation.
The McQuay Seasontrol, available as an accessory, offers automatic head pressure control for use any time of the year, winter or summer. For complete information call your local McQuay representative, or write McQuay, Inc., 1607 Broadway Street N. E., Minneapolis 13, Minnesota.

McQuay Means Quality

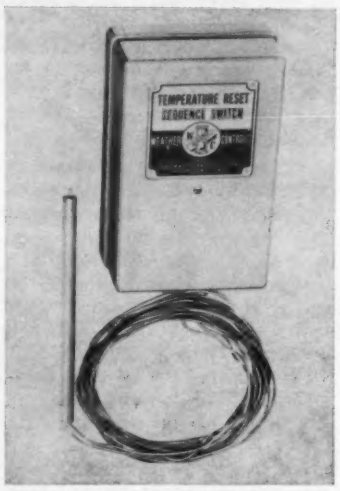


for AIR CONDITIONING, REFRIGERATION OR BOTH

13 SIZES • 8 TO 85 TONS IN A SINGLE UNIT

McQuay INC.
AIR CONDITIONING • HEATING • REFRIGERATION

Control Unit Energizes Up to 4 Circuits



● A new low-cost miniature control unit designed to energize from two to four electrical circuits at pre-selected temperatures or pressures has been announced by Automatic Devices, Div. of American Machine & Metals, Inc., Dept. AH&RN, Sellersville, Pa.

The "Temperature Reset Sequence Switch" can be used in any heating or cooling or other control circuit where a series of two or more separate circuits is to be energized at selected changes in temperature or pressure, the manufacturer said.

Typical applications listed for the device include loading and unloading compressors which serve chillers or unit conditioners; sequencing cooling and heating action of heat pumps and auxiliary resistance heaters; effecting multiple "thermostat" action. It can be used with multiple compressors, or to effect multistage operation of single compressors.

"The control is engineered to compensate for ambient temperature changes occurring along the connecting capillary and at the head, thus giving precise temperature sensing and control despite wide ambient temperature fluctuations," it was stated.

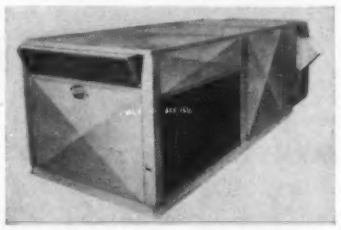
'Foamat' Filter Claims Low Maintenance

● AAF "Foamat" filter, a new unit air filter employing a single sheet of synthetic plastic material, has been added to the line of products manufactured by American Air Filter Co., Inc., Dept. AH&RN (PD), 215 Central Ave., Louisville 8, Ky.

"Sponge-like in appearance, Foamat breaks an air stream into little jets as it passes through the filter," the company explained. "Dust and dirt cannot follow and are trapped in great quantities by the cells. Designed as a permanent filter, Foamat will not pack, settle, separate, or develop 'thin' spots.

Stating that Foamat "offers greatly reduced maintenance," the company said the filter "can be practically and successfully washed with a standard spray-head hose nozzle without removing the filter from the filter bank. Where stubborn process dusts are encountered the filters may be removed, soaked in a mild detergent, rinsed with cold water, and reset in place.

"AAF Foamat filter media is pleated into a holding frame in order to present the greatest possible area for dirt storage. It is completely interchangeable with other pleated-media filters. Foamat is resistant to all moisture and vermin and is chemically treated to assume permanent flame resistance."

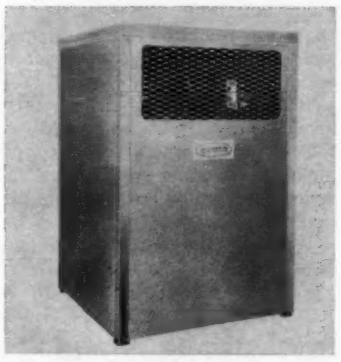


'Atmos-Pak' Eliminates Need for Ductwork

● Addition of a 17½-ton unit to its line of "Atmos-Pak" air-cooled, roof-mounted, year-round air conditioning systems has been announced by Air-Conditioning, Inc., Dept. AH&RN, 88 North Highland Ave., Ossining, N. Y. Other units in the line range from 5 to 35 tons.

"Ductwork is eliminated with Atmos-Pak," the company said, "for the units come complete with prefabricated supply and return distribution chambers. Only three simple connections are required for complete installation.

"The units need no field assembly of any kind. The universal heater section which is part of the system may be had with either oil, or gas-fired exchangers."

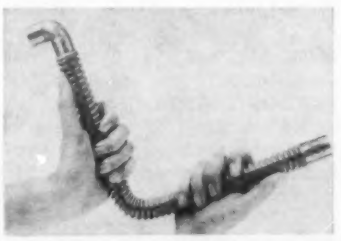


Ice Machine Features Water Conservation

● Addition of a new model—SC 263-AC—to the "Instant-Ice" machine line has been announced by Liquid Freeze Corp., Dept. AHRN, 1133 24th St., Oakland 7, Calif.

"This unit is designed as a 'water saver'—the only water used is the amount necessary to produce ice—approximately a pint of water to the pound of ice flakes produced," the company stated. "Ice flakes are sub-cooled, dry and hard; unit capacity is up to 1,200 lbs per 24 hours operation.

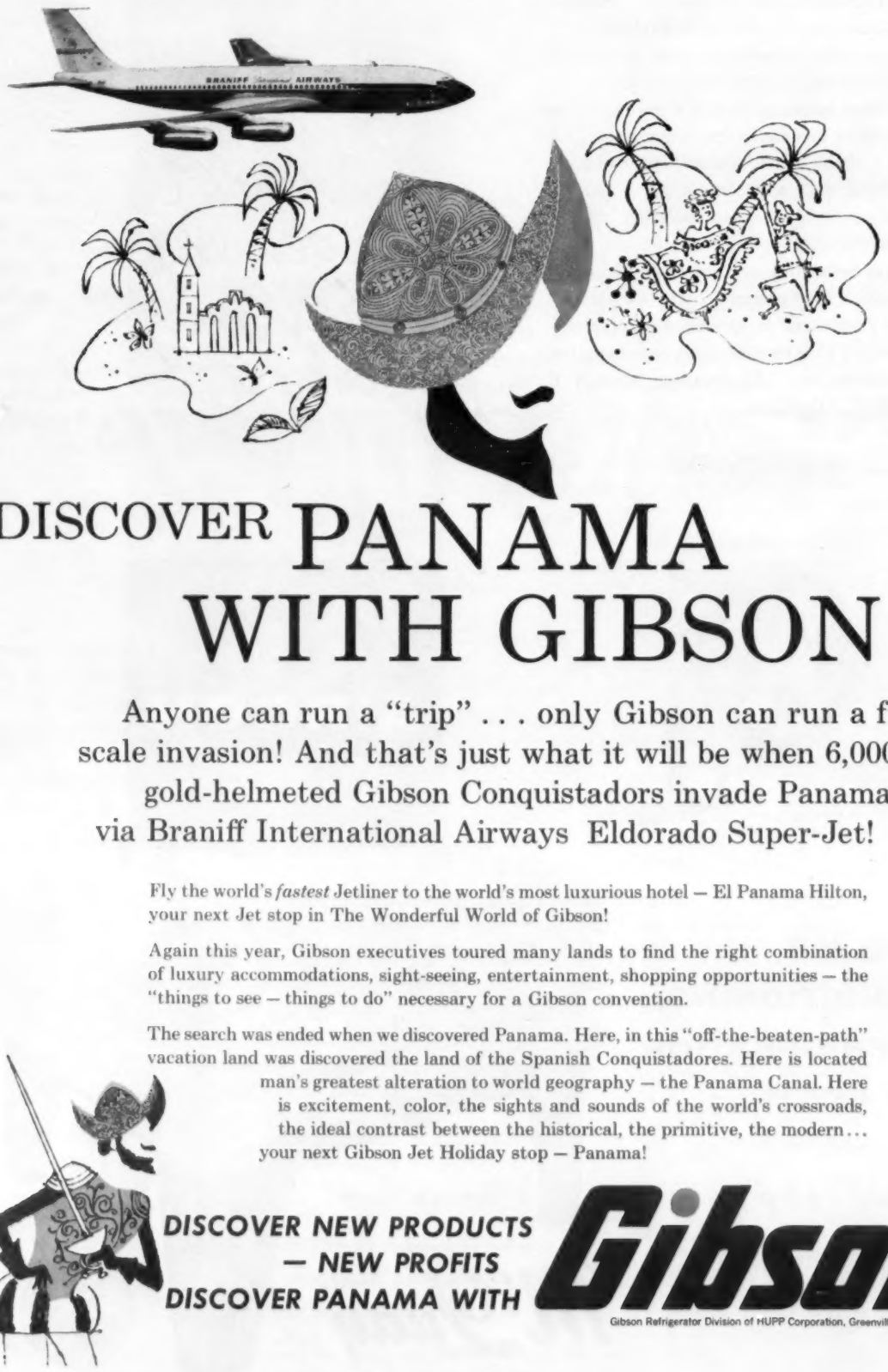
"Condensing unit is air cooled, hermetic type, 2 hp. Unit over-all dimensions—30 in. by 30 in. by 48 in. high."



Hydronic Connectors, Nipples Made of Copper

● Introduction of a new line of hydronic connectors and nipples made of copper has been announced by Cobra Metal Hose, Dept. AH&RN, 5059 South Kedzie Ave., Chicago 32.

The line has the flexibility of metal hose, plus the proven performance ability of copper, the company said. The new "Form-A-Line" connectors and nipples are designed for use on all wet heat systems. "Extremely flexible, they can be formed by hand to connect radiators, pipes, expansion tanks, etc.," it was stated.



DISCOVER PANAMA WITH GIBSON

Anyone can run a "trip" . . . only Gibson can run a full scale invasion! And that's just what it will be when 6,000 gold-helmeted Gibson Conquistadors invade Panama via Braniff International Airways Eldorado Super-Jet!

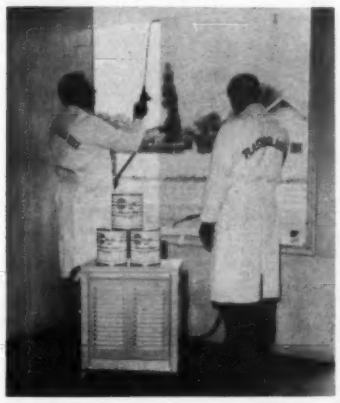
Fly the world's *fastest* Jetliner to the world's most luxurious hotel — El Panama Hilton, your next Jet stop in The Wonderful World of Gibson!

Again this year, Gibson executives toured many lands to find the right combination of luxury accommodations, sight-seeing, entertainment, shopping opportunities — the "things to see — things to do" necessary for a Gibson convention.

The search was ended when we discovered Panama. Here, in this "off-the-beaten-path" vacation land was discovered the land of the Spanish Conquistadores. Here is located man's greatest alteration to world geography — the Panama Canal. Here is excitement, color, the sights and sounds of the world's crossroads, the ideal contrast between the historical, the primitive, the modern . . . your next Gibson Jet Holiday stop — Panama!

DISCOVER NEW PRODUCTS — NEW PROFITS
DISCOVER PANAMA WITH Gibson

Gibson Refrigerator Division of HUPP Corporation, Greenville, Michigan



Flow-on Window Tint Reduces Sun's Heat

● A new low-cost method of tinting window glass in place is providing savings in air conditioning costs, cutting down window-glare, and reducing damage to merchandise or home furnishings due to sun-fading, claims Acorn Glass Tint, Dept. AH&RN, 1123 West Century Blvd., Los Angeles 44.

"The plastic coating is applied by a flow technique and operates in the same manner as an optical filter—selecting and cutting out by wave-length those portions of sunlight that produce the most heat (infrared), glare (blue, violet), and fade (ultraviolet) while permitting the useful visible portion of the spectrum to pass through," it was explained.

Nine transparent color tints and three frosted coatings are available. The glass tinting is accomplished by a gravity flow-on technique utilizing specially developed equipment as well as the special liquid-plastic emulsion.

Portable Electric Room Humidifier Introduced

● A portable electric room humidifier that produces an atmosphere with 85 to 90% relative humidity at about 5°F. above room temperature, which is readily equalized in the room without condensation, has been introduced by Rotherm Engineering Co., Dept. AH&RN, 7280 W. Devon Ave., Chicago 31.

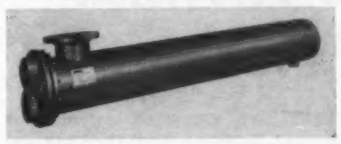
In the Rotherm humidifier, drops of water are lifted up a hollow spinner tube and centrifugally forced against heated coils causing instantaneous evaporation of the drops. A fan draws dry room air over the coils where it absorbs the evaporated moisture.

The unit discharges 1 lb of water per hour and circulates air at 15 cfm. Water reservoir holds 2 gals. When water supply is exhausted, a float controlled switch automatically shuts off the unit, according to the company.

Fractional horsepower motor plugs into 110 volt, 60 cycle, alternating current. It draws 550 watts. Humidifier measures 13 by 13 by 12 in.

A humidistat is available at extra cost. It plugs into wall socket and has only to be preset for desired humidity.

Converter Heats Radiation Water with Steam



● Newest in its complete line of components for the whole system is the "SC" steam converter, according to Dunham-Bush, Inc., Dept. AH&RN, 179 South St., West Hartford 10, Conn.

Used primarily for heating radiation water with steam, the converter "offers distinct application advantages," the company said. "Piping design is simplified and design work is reduced. The SC is highly efficient for providing heating water for office space in industrial buildings. When applied to high buildings, SC keeps static heads at reasonable levels."

Other Dunham-Bush components include condensate pumps, F & T traps, strainers, hot water circulators, air separators, and radiation.

Descaler Has Built-In Color Indicator

● A new "safe, easy-to-use" descaler has been announced by Dearborn Chemical Co., Dept. AH&RN, Merchandise Mart Plaza, Chicago 54.

"Known as 'Scale-Cleen,' the product is made with sulfamic acid and inhibitors that allow the acid to clean and dissolve scale without corroding or damaging metal," the company said. "A built-in color indicator shows when the acid has been spent.

"The easy-to-store product, which is 95% acid, is recommended for acid cleaning of boilers, air conditioners, heaters, evaporators, heat exchangers, steam generators, diesel cooling systems, dairy equipment, pasteurizers, etc."

'Zonar Valve' Said To Cut Installation Time

● A "Zonar Valve" that is claimed to speed installation and cut servicing time in all types of hydronic heating systems is being introduced by Modern Flo-Trol Products Corp., Dept. AH&RN, 367 Farmingdale Rd., Babylon, L. I., N. Y.

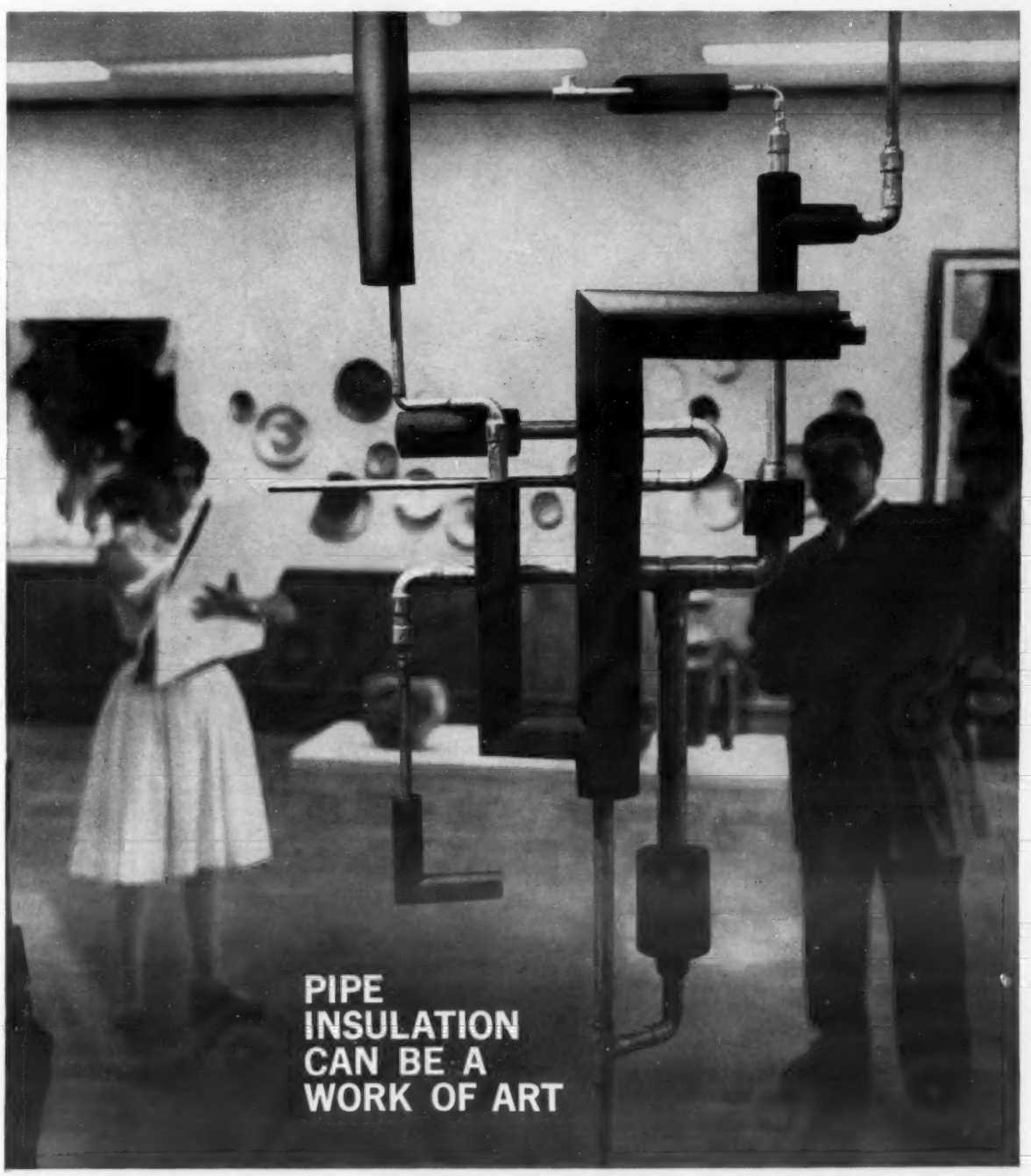
The company said the valve provides easy self-servicing by the user due to an exclusive straining method with removable strainer that protects working parts from dirt and other foreign matter, and a non-strip 24-v., 60-cycle motor with built-in click signal that notifies user of valve restriction.

"By simply loosening nut and removing the butterfly, the cause of restriction is quickly and easily removed," it was stated. "In event of thermostat or transformer failure, the valve can be operated manually for gravity flow without disturbing the motor assembly."

The valve is available in three models: No. 257, ¾ in.; No. 258, 1 in.; and No. 259, 1¼ in.

Modern Flo-Trol also announced other new companion products in its line of hydronic heating specialties and components. Model No. 357 is a high velocity circulator with ¾, 1, 1¼, and 1½ in. interchangeable flanges, and is particularly designed for use with zone valves and long runs of pipe. Model No. 600 is a bronze body reducing valve which features a check valve, built-in strainer, and extra large diaphragm and is available in ½-in. size, factory set at 12 lbs, but with adjustable range from 3 to 28 lbs.

More details on the products described on these pages may be obtained by writing the manufacturer at the address given in each story.



The job looks neater... goes faster with B.F.Goodrich insulation tubing

B.F.Goodrich insulation tubing makes the finished job look good enough to go on exhibition . . . *yet it takes 50% less time than the old-fashioned methods of insulating pipe.* It slips on straight or bent pipe as easily as a ring on your finger. If pipes are already connected, it can be slit, snapped on and cemented in no time. Fitting corners is no problem—you just slice off needed shape with a sharp knife and cement parts together.

This BFG tubing is made of tough, flexible cellular rubber that effectively insulates pipes carrying liquids ranging from −20°F. to 200°F. It doesn't rub off or crumble, comes in 6-foot lengths, many wall thicknesses. For full information, call your B.F.Goodrich distributor, or contact *The B.F.Goodrich Company, 180 Derby Place, Shelton, Connecticut.*

INSULATION TUBING BY B.F.Goodrich

Air Conditioning for Radio and Television Center Presents Many Special Problems

NORFOLK, Va.—Many problems were encountered when designing an air conditioning system for the WTAR Radio and Television Center here.

WTAR, the oldest commercial broadcasting station in Virginia, is located in a building 100 ft long, 49 ft wide, and 35 ft high. The main studio is in the center of the building.

The building is constructed with few outside openings other than the main entrance. This required the use of a year-round air conditioning system with maximum outside air arrangements and outboard air release.

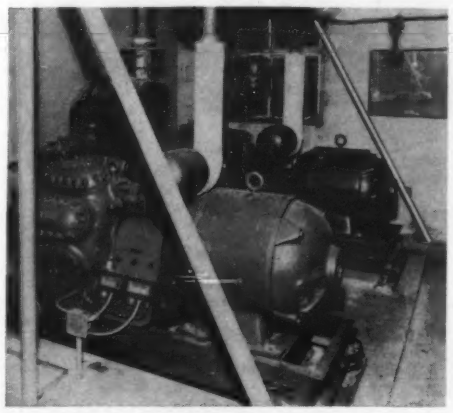
Problems encountered include extensive use of electricity and resulting sensible loads which required large air volumes, need for quiet operation, rapid and heavy impact on the system when the main studio was in use for "live" TV broadcasts, sudden drop in load requirements when broadcast reverted to network operation, and the necessity for arranging air distribution so as to avoid the physical properties, plus electronic and lighting devices.

Secondary problems were caused by a very heavy load in small spaces such as the main control room. Some offices also required separate zoning.

Two 40-hp Trane reciprocating compressors are installed on the second floor of the building, adjacent to the main studio. They are mounted on double rubber-in-shear isolators set on 4-in. channels and secured to a concrete pad poured with the compressor room floor. Other main components of the system are located on the building roof.

Two Trane evaporative condensers, properly coated for preservation and sound absorption, are located outside on the roof. They are also supported on rubber-in-shear isolators. Both units are equipped with by-pass arrangements.

Air handling equipment is located in a roof penthouse. It consists of a large built-up unit to supply the main studio and a factory-built "Climate Changer" central station air handling unit for other zones.



AT WTAR Radio and Television Center in downtown Norfolk, Va., two Trane reciprocating compressors on the second floor meet the demand for quiet air conditioning equipment. The equipment air conditions the main studio as well as the offices and control rooms.

The large built-up unit consists of a 49-in. Trane centrifugal fan that will move 18,000 cfm of air, three Trane DX evaporator coils with a total face area of 27 ft, and three Trane steam heating coils with the same face area.

The Climate Changer has a 10,500 cfm capacity. Seven Trane reheat coils are installed in the ductwork to the seven zones served.

To secure a quietly operating system, careful attention was given to the tip speed of fans. Air supplied to the main studio passes through a sound trap. The duct is divided into 9-in. wide passages by vertical sheet metal pieces which are completely covered with ½-in. sound absorption material. Air return from the main studio is handled in a similar manner.

A continuous exhaust from the upper level of the main studio is maintained to reduce excess heat gain from studio lights, rather than return the air for cooling dehumidification. A Trane utility fan with 2,090 cfm capacity is used for this purpose.

Two other Trane utility fans are used for exhaust purposes elsewhere in the building. One, with 2,025 cfm capacity, removes air from the main projection room. The other, with 5,825 cfm capacity, handles the compressor room exhaust.

Pneumatic controls are used throughout. Control of outside air is obtained by what might be called an economizer arrangement. There are two air systems served by a single inter-connected or cross-connected refrigeration system which consists of the two Trane reciprocating compressors and the two evaporative condensers.

Capacity control of refrigeration and air units is by pneumatic positioning of modulating attachments in response to temperature or humidity. The pneumatic system imposes air on the Trane compressor capacity control actuators as required.

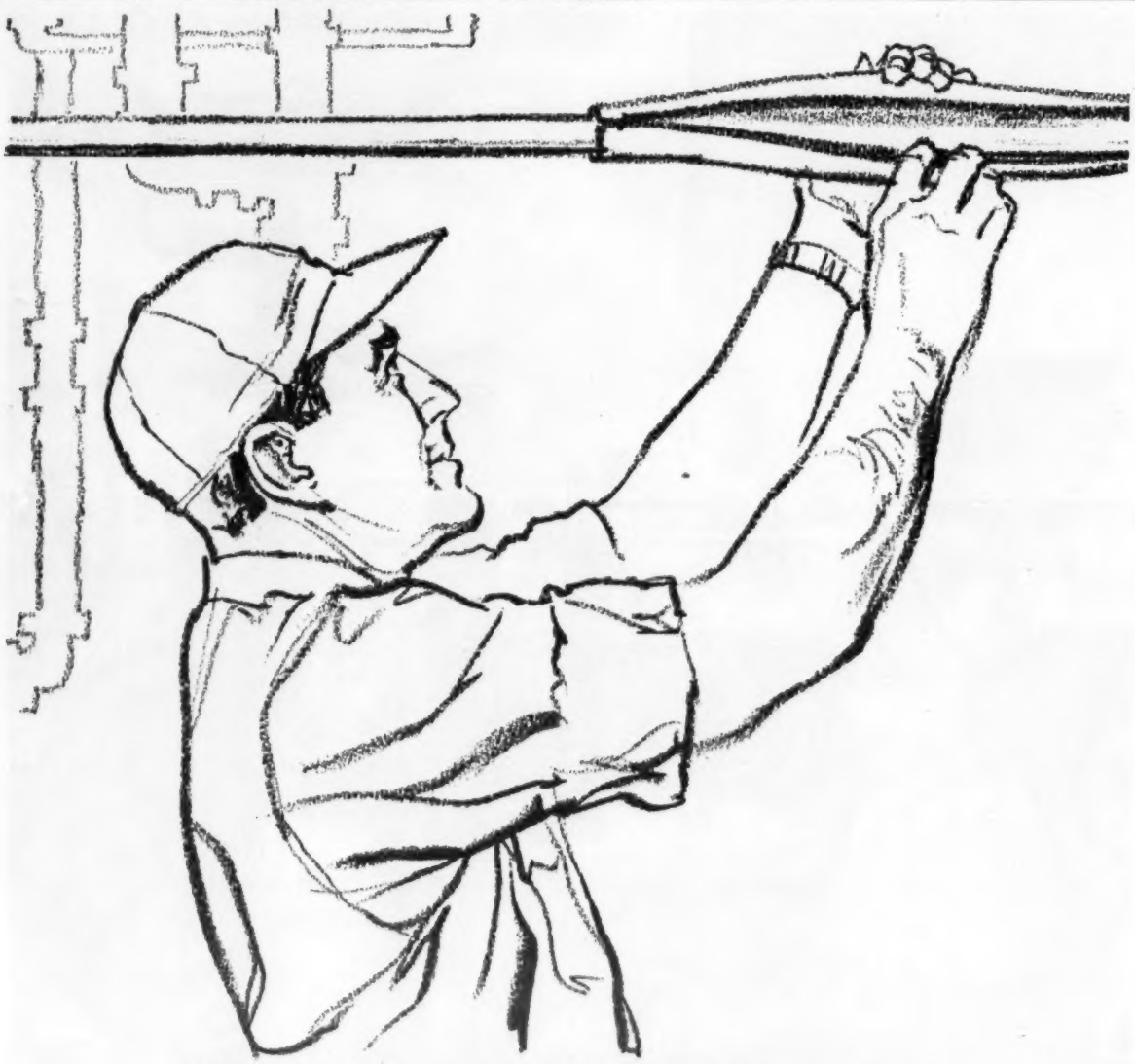
Heating is provided by steam from an existing steam plant and controlled by pneumatically operated steam valves.

In order to maintain condensing temperature within reasonable limits, the operation of the evaporative condenser spray pumps and of discharge and recirculation by-pass dampers is pneumatically controlled.

As a safety precaution, firestats are provided in the air system to stop fans when excessive temperature occurs.

It is interesting to note that the thermostat in the main studio may be remotely adjusted from TV control room.

The WTAR Radio and Television Center was designed by the architectural firm of Rudolph, Cooke, and Van Leeuwen. L. E. Huybert, Jr. and A. L. Land were the mechanical and electrical engineers. The mechanical contractor was the Cos-Frank Corp. All are located in Norfolk.



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Readers Comment on Technical Problems

Have You Had 3-Phase Trouble?

Ashley's Refrigeration & Electric Shop
Graham, Texas

Editor:

For some time the balance of open delta three phase banks serving various size motors has caused lots of calls to re-fuse and change heaters on controls. Our service is mostly refrigeration and air conditioning, so most of our complaints come urgent.

The local power company has closed most of this type bank correcting the unbalance condition. Some of the conditions were volts 235, 238, 244 amps 10, 14, 19—closed bank volts 235, 236, 238—amps 12, 12, 13 another volts 239, 239, 248—amps 15, 18, 25 closed 15, 16, 15.

In some near towns we have the same trouble as

volts—222, 220, 234 amps—12, 9, 17

volts—220, 225, 234 amps—11, 14, 18

volts—232, 238, 244 amps—17, 13, 8

on the open banks delta. The company contends they have no trouble. The voltage is within the percent limits.

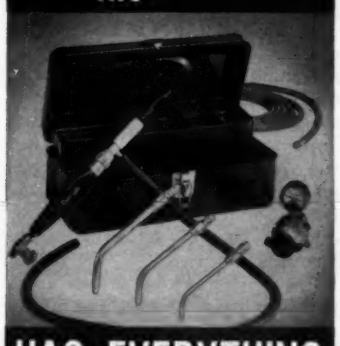
Now we find the high ampere lead remains on the same power leg when we switch motor leads. This makes "A" phase of the motor windings carrying an excess in amperes of the rating plus the service factor and some extra. Motor manufacturers tell me this is bad. Especially in a higher than normal ambient temperature (condenser discharge over the motor).

We offered to pay for closing the bank if it did not correct the trouble. So far they have changed transformers without much help. Only 1 ampere change with 2 volts nearer balance on the motor control box also at the entrance switch. All readings are at motor control checked against service with less than 2 volt difference.

Have any of you a similar problem or a better solution?

A. H. ASHLEY

This single compact kit



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STATEMENT REQUIRED BY THE ACT OF AUGUST, 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, JULY 2, 1946 AND JUNE 11, 1960 (74 STAT. 208) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF

Air Conditioning, Heating and Refrigeration News published weekly at Detroit, Michigan for October 1, 1960.

1. The names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, Business News Publishing Company, Detroit, Michigan.

Editor, George F. Taubeneck, Grosse Pointe, Michigan.

Managing editor, Phil B. Redeker, Detroit, Michigan.

Business manager, Edward L. Henderson, Birmingham, Michigan.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses, of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as each individual member, must be given.)

Business News Publishing Company, Detroit, Michigan.

Helen C. Henderson, Birmingham, Michigan.
George F. Taubeneck, Grosse Pointe, Michigan.
Phil B. Redeker, Detroit, Michigan.
Robert M. Price, Hillsdale, New Jersey.
C. Dale Mericle, Traverse City, Michigan.
Walter J. Schuler, Detroit, Michigan.
Edward L. Henderson, Birmingham, Michigan.
John O. Sweet, Detroit, Michigan.
P. Allen Schildhammer, Grosse Pointe Michigan.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)

None.

4. Paragraphs 2 and 3 include, in cases where the stockholders or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required by the act of June 11, 1960 to be included in all statements regardless of frequency of issue.)

22,282.

Edward L. Henderson,
Business Manager

Sworn to and subscribed before me this 3rd day of October, 1960.

[SEAL] Terry Kuhn Treiber
Notary Public, Wayne County, Michigan
(My commission expires December 31, 1963.)

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Cites Humidity Control as Solution To Common Problem of Overcooling

Sears, Roebuck & Co.
Chicago, Ill.

Editor:

I read with increasing interest the editorial in the Aug. 29 NEWS entitled "Air Conditioning Can Be Shocking."

I am somewhat "shocked" and amazed that you aren't aware of the solution to this problem of overcooling. The answer is Humidity Control!

Why do restaurants, theaters, etc., run their thermostats so low? If they don't, the place will be sticky and clammy.

With positive humidity control, all the objectionable aspects of conventional air conditioning disappear. With humidity control you can set the thermostat for a comfortable 78° to 80°F but set the humidistat at 45 to 50% relative humidity and maintain a dry atmosphere. Yon don't have to be cold to be comfortable!

Since I have installed humidity control in my home, the female members (wife and daughter) no longer require sweaters and lightweight jackets. And they are completely sold on it! There is no "Thermal shock" when you enter from outside. Just the feeling of dry, crisp, spring-like atmosphere.

Reports from users everywhere are enthusiastic. "Most comfortable air conditioning I've ever experienced." "Conditions a much larger area than I expected." (Reason: one humidity control "room" unit will effectively *dehumidify* an entire home.) And you can't overcool an area with humidity control, regardless of how small the area and how large the unit.

I would suggest that you try out one of our Coldspot "Automatic Humidity Control" room air conditioners equipped with both a thermostat and a humidistat, with separate, positive, dehumidification-reheat cycle. I think he will find that the perennial problem of the air conditioning industry is the br-r-r-r fact that neither the industry nor the public is yet aware of the importance of humidity control!

I'll even go so far as to say that within 10 years or less, an air conditioner without humidity control will be as obsolete as the Model T!

C. N. HUTTER, Buyer
Air Conditioners & Dehumidifiers

Suggests Larger Fan Coil Unit

Warren Webster & Co., Inc.
Camden, N. J.

Editor:

I have read with great interest George Nachman's viewpoints on fan-coil unit design, which were published in the NEWS, July 25, 1960 issue under the title "Apartment House Air Conditioning Forum."

His view is that there should be more coil in fan-coil units so that the same amount of cooling could be accomplished with less water flow (resulting in a high water temperature rise through the unit—say 10°F to 12°F). This total installed cost of the job decreases.

I would like to point out that fan-coil units are extremely flexible in application and that, if more cooling is required with less water and that if fan-coil unit cost is a minor item compared to piping, one can simply select the next larger size fan-coil unit. The various sized units do not differ greatly in cost. In other words, I feel that a slightly different basis of unit selection would solve his problem. Most manufacturers' catalog data provides all information required to do this.

If manufacturers put more coil into their units in accordance with Mr. Nachman's viewpoints, not only would unit costs go up, but those who design on 6° or 8° water temperature rise would be in trouble on two other scores:

1. Too low a discharge air temperature.
2. Excessive sweating—particularly at the discharge grille.

Mr. Nachman's idea is interesting, but I feel, if the above solution suffices, that his problem is of minor importance compared to other problems of the fan-coil business, such as proper provision for ventilation, proper control, condensate removal and pipe insulation, and so forth.

JOHN N. PRATT, Manager,
Product Research and
Field Service

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TECH CENTER

by Frank J. Versagi, Technical Editor

Low Temperature Refrigeration & Cryogenics (2)

CRYOGENICS, correctly defined, is the study of the properties of materials at ultra-low temperatures.

The term is increasingly being misapplied to the techniques used in attaining the low temperatures required for cryogenic studies.

This group of articles surveys cryogenics, as such, then proceeds to discuss briefly the several refrigeration techniques employed to reach low temperatures and the installation and service problems which are peculiar to such applications.

For the majority of practical low temperature applications, conventional vapor compression refrigeration is adapted. Indeed, the burgeoning application for environmental testing units depends on refrigeration equipment to produce the low temperatures required, just as they depend on electric heating, steam, or other heat to reach the upper temperatures, and on efficient vacuum pumps to simulate high altitudes.

Various authorities hold that single compression, single stage refrigeration, can be used to -30° to -40°F. Two and three-stage compression systems are used to reach -75°; some say -100° in smaller installations. To go below -100° to -150° or 200°, compression refrigeration is used in cascade. (For very large installations of several hundred tons, non-reciprocating compressors may be used to get multistaging, but this discussion will concentrate on the more common use of reciprocating compressors.)

Single stage compression poses no major problems when applied to low temperature refrigeration. A capillary tube will handle a wide range of work, as in a case which operates from ambient down to about -40°; a thermostatic expansion valve is used when heavy loads will be imposed on the system.

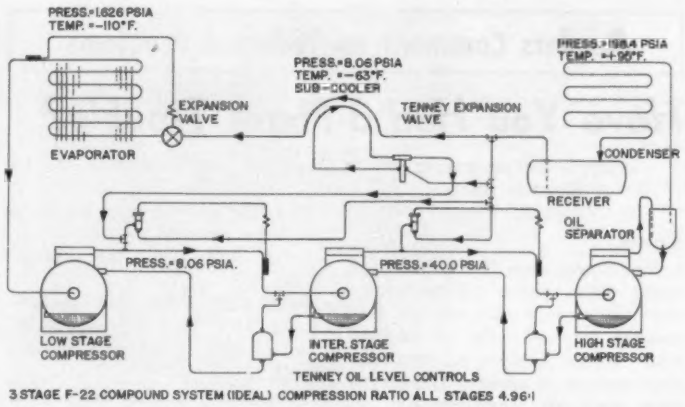

FIG. 1—A typical 3-stage, low temperature system (Tenney Engineering, Inc.).

Mainly, the components on a single stage low temperature system are the same as those on a normal unit. The compressor suction valves may need less spring tension to enable the cylinder to fill during the suction stroke, and the increase in gas volume at low temperature means far more displacement is needed from the compressor.

However, care must be taken not to allow motors to overheat or reeds to burn out. The compression ratio must be kept constantly in mind, as must the related discharge temperature. The usual refrigerant in single stage low temperature units is Refrigerant-22.

In multistaging, the discharge of the low stage compressor is the suction of the intermediate or high stage compressor. Three stages seem to be the practical limit. Multistaging decreases the pressure difference across which each compressor must work, reducing wear on bearing systems, as well as lowering the compression ratio.

To multistage, separate compressors may be used, or internally compounded compressors may be applied.

The layout of a typical 3-stage system is shown in Fig. 1. In such a compound system, a single refrigerant is used; and the compression ratio (the quotient of condensing pressure to evaporating pressure) is kept within good practice for each compressor.

An internally compounded 2-

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Witt exclusive Defrostair patented Heat Trap coil requires only a low cost single pole, double throw time clock for complete automatic defrosting. Easy **low cost** installation. Requires no re-evaporation or special plumbing. Completely automatic. Available in 21 models ranging in BTU capacities from 1400 to 44,100 at 10°T.D. **Write today** for complete Witt Catalog.

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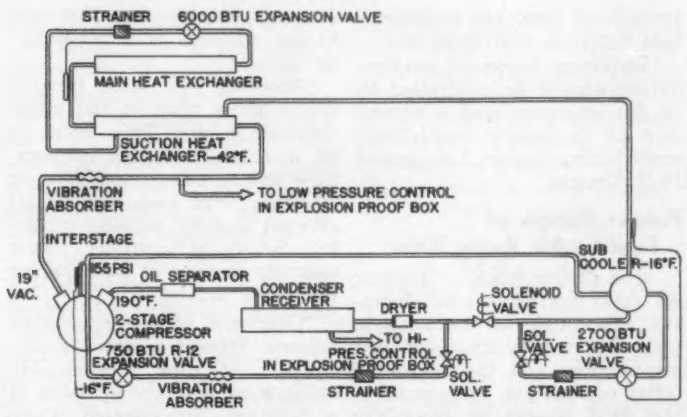

FIG. 2—Multi-stage compression can be accomplished with internally compounded compressor as in this system by Alpha Electric Refrigeration Co.

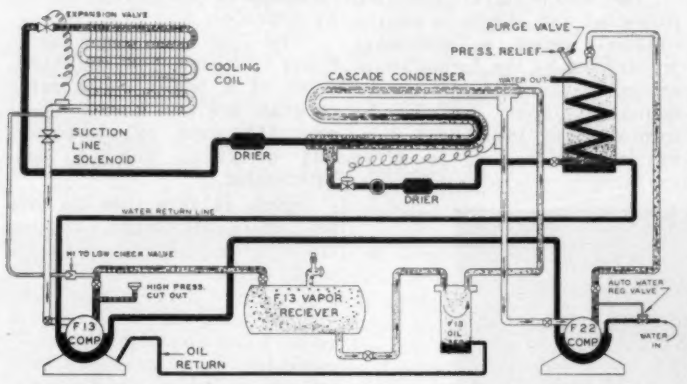

FIG. 3—A typical cascade system using Refrigerants-13 and 22 (Conrad, Inc.).

stage compressor is used in the system in Fig. 2.

An intercooler or interstage is used on multistage systems to cool the refrigerant vapor between stages to prevent overheating the next stage compressor.

Most multistage systems also use Refrigerant-22.

Cascade systems reach the lowest temperatures normally attainable with vapor compression refrigeration, although there are some combination cascade/multistage applications. Cascade refrigeration makes use of more than one refrigerant; actually, a series of refrigerants with progressively lower boiling points may be applied.

A simple cascade system, for example, combines two vapor compression units, with the condenser of the low temperature system discharging its heat to the evaporator of the high temperature system. The condensing temperature of the low temperature system is 5-10° above the evaporator temperature of high pressure system.

Fig. 3 depicts a typical cascade system using R-13 and 22.

The use of high pressure refrigerants such as R-13, ethylene, ethane, in the low temperature unit allows the use of a compressor with a smaller displacement because of the refrigerant's low rate of volume flow per ton.

The concluding article in this series will discuss design operating, and service characteristics of low temperature systems which differ from these characteristics in normal temperature refrigeration.

(To Be Continued)

Lau Blower Names W. W. Morrisey

DAYTON—William W. Morrisey has been appointed director of marketing for The Lau Blower Co., according to T. I. Byrd, president of the blower, fan, and builder products manufacturing firm.

Morrisey

"This is a new position within our company and reflects another step in our long range planned organizational arrangement," Byrd said.

"Morrisey will have full responsibility for all product marketing of the corporation. This includes all items made in our Dayton and Cleveland, Ohio, Irwindale, Calif., and Kitchener, Ont., plants.

"One of Morrissey's first duties will be the selection of two new product sales managers—one to replace himself as blower sales manager and one to replace E. V. Sullivan, fan and builder products sales manager, who has resigned."

McCord Names Davis Advertising Manager

DETROIT — Appointment of John T. Davis as advertising manager of McCord Corp. here has been announced by Dean S. Fields, president.

J. T. Davis

Until recently, Davis was the advertising supervisor of the parts and accessories division of one of the "Big Three" automobile companies.

Davis succeeds Edwin O. Bodkin who retired Aug. 31 after having held the position of advertising manager for 37 years.

5 Sales Representatives Appointed by Union Carbide for 'ULOK' Cube Air Filters

NEW YORK CITY — Five sales representatives for "ULOK" cube air filters were appointed recently by Union Carbide Development Co., division of Union Carbide Corp.

Sanford Mechanical Equipment Co., Oakland, Calif., was named representative for California, Nevada, and Arizona.

Howard V. Caton, Charlotte, N. C., has been appointed representative in North and South Carolina.

C. R. Clingman, Inc., New Orleans, was appointed representative for Louisiana.

J. F. Spears Co., Miami, Fla., has been named representative in eastern Florida. The company will cover Florida east of the Apalachicola river.

Active Fireproofing & Duct Cleaning Corp. of Pennsylvania has been appointed representative in that state. Located in Pittsburgh, the company will cover these counties: Allegheny, Armstrong, Beaver, Butler, Fayette, Greene, Lawrence, Washington, and West Moreland.

North Carolina Exams Scheduled for Oct. 17

RALEIGH, N. C. — Regular examination for the state refrigeration contractor's license will be held here Oct. 17 in the office of the North Carolina State Board of Refrigeration Examiners, announces James A. Dean, executive secretary of the board.

Carrier Expands Los Angeles Facilities

LOS ANGELES — Carrier Corp. facilities here are being enlarged. Construction plans call for completion by Dec. 15.

Present floor space of 20,000 sq ft is being increased to 44,000 sq ft to meet needs of two divisions of Carrier Corp.—Carrier Air Conditioning Co. and Elliott Co.

The Elliott sales offices for electric motors, turbines, air and gas compressors, and Crocker-Wheeler electric motors, now located in downtown Los Angeles, will be moved to the new location when construction has been completed, according to Vernon A. Peterson, western regional manager for Elliott.

Most of the new construction will create additional warehouse and shop spaces to be used by Carrier Air Conditioning Co., according to Robert C. White, western regional manager of the Machinery & Systems Organization, and Jack A. Gazelle, western manager of the Unitary Equipment Organization.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

NEW Pressure and Temperature Controls

Assure Greater Accuracy ... and Reliability

Especially designed for modern air conditioning systems, these new A-B controls provide lower differentials and longer life, even when cycled from zero to maximum setting. Both range and differential are adjustable. The precision operating switch has a positive "snap action"—vibration cannot cause faulty operation. And its silver contacts never need attention. Write for full details about these new A-B controls.

Bulletin 837 Temperature Control equipped with capillary tube and bulb. Available for temperature ranges from —150°F to 490°F.

Bulletin 836 Pressure Control for use at pressures from 30" vacuum (Hg) up to 900 psi.

Allen-Bradley Co., 1313 S. First St., Milwaukee 4, Wis.
In Canada: Allen-Bradley Canada Ltd., Galt, Ont.

ALLEN-BRADLEY
Member of NEMA
Quality Motor Control

Speed Service and Get a Cleaner, Drier System!

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PORTABLE HIGH VACUUM PUMPS—

A better job—faster . . . that means completely satisfied customers and more service per man per day. It also means that with modern equipment your service operations turn in the profits you're now losing.

These KINNEY Portable units enable you to LEAK TEST . . . EVACUATE . . . DEHYDRATE Freon Refrigerating and Air Conditioning Systems in the shop or on location. The KC-3R, displacing 3 cfm at 1135 rpm, is especially suited to systems of 10 tons or less. The KC-8R, with free air displacement of 8 cfm at 1000 rpm, is the Pump for systems exceeding 10 tons. Each of these KINNEY Pumps includes: Bourdon type Vacuum Gage, automatic Vacuum breaker in case of power failure, male fitting for connecting to copper tube suction line, 10 ft. plug-in cord and snap switch and carrier handle.

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THE NEW YORK AIR BRAKE COMPANY
3617K WASHINGTON STREET • BOSTON 30 • MASS.

Write for Bulletin No. 4570.1 and price information today!

Please send me Bulletin 4570.1 describing KINNEY Portable High Vacuum Refrigeration Service Pumps.

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Problems—and Solutions—In Operating Boiler Plants Outlined for Air Force

DAYTON—Some of the problems and solutions involved in achieving maximum efficiency and minimum operating costs with large central heating and power plants were outlined in a lengthy discussion by Prof. Paul J. Grogan of the University of Wisconsin at the recent Heating and Power Conference conducted by Headquarters, U. S. Air Force at Wright-Patterson Air Force Base here.

Prof. Grogan, who is chairman of the department of engineering for the university's extension division, pointed out, for example, that "driving a boiler beyond its normal maximum capacity for sustained periods leads to dangers largely arising from an overheated furnace.

"Flame impingement on heat transfer surface or refractory may be taking place. Clinker and slag formation are more likely to occur. Steam blanketing may take place in zones having high rates of evaporation.

"The fan motors may overheat from overload. Superheated steam temperatures may become excessive and carryover is more likely to occur at a time when it is highly undesirable," he explained.

"Overload may be due to hesitancy upon part of operating personnel to put additional equipment into service, or it may be due to gross mis-use of services somewhere on the system.

"Either cause can be quickly corrected and do much to increase equipment life and reliability while reducing hazards and maintenance costs.

"The problems of load swings, rapid starts, and frequent shutdowns all contribute to reduced boiler life in terms of operational hours in increased maintenance.

"A boiler is a steady-state device and performs best under equilibrium conditions. The operating crew should be given rigorous start-up and shutdown procedures that are considered best for each individual unit.

"Swinging loads of extreme nature should be controlled by an investigation and a correction of the major controllable contributing factors," suggested Prof. Grogan.

Proper Range of Fuel-to-Air Ratio Vital

"The proper range of fuel-to-air ratio is vital to good operation. Too little air can lead to poor flame stability, inefficient combustion, and the threat of 'after combustion' or burning in the final passes or secondary heat-recovery equipment.

"The well-being of operating personnel and others in nearby confined spaces is somewhat jeopardized by the formation of excessive amounts of carbon monoxide. Soot and smoke formed from insufficient combustion air lead to losses in economy, decreased safety, and to the creation of a nuisance," he said.

"However, the usual furnace condition is that of too much combustion air. This leads to an increased exit gas temperature and a subsequent loss in efficiency. Fan loads will be increased unduly, causing a further waste in auxiliary power and the danger of overheating the drive motors.

"Carryover of stoker ash may become excessive, causing the dangers of tube erosion, fan blade wear, and the creation of a nuisance. Superheated steam temperature may be difficult to maintain at the control point," he indicated.

"The four chief concerns in boiler operation from the standpoint of a water conditioning program are well known. These are: (1) scale, (2) corrosion, (3) carryover, and (4) embrittlement.

"Each, in turn, has its own set of contributing factors. Good operation is not always easily obtained because of an interplay of factors that have counter influence with respect to the items above. For instance, corrosion can scarcely take place in a boiler with heavy scale.

"Embrittlement is less likely to occur in a boiler that is underprotected from a corrosion point of view. Carryover increases generally as one attempts to counteract scaling tendency," Prof. Grogan said.

"Scale can be controlled by several means. There will be no attempt here to go into any details. Suffice it to say that scale may be minimized by employing all or any combination of the following programs: (1) external removal of troublesome ions by any of a variety of process involving evaporation, ion exchange, or precipitation; (2) internal precipitation of troublesome ions in a relatively harmless form; (3) dispersal of scale-forming precipitates in other suspended matter; (4) control of concentrations by reducing make-up or increasing blowdowns," he explained.

Causes of Corrosion

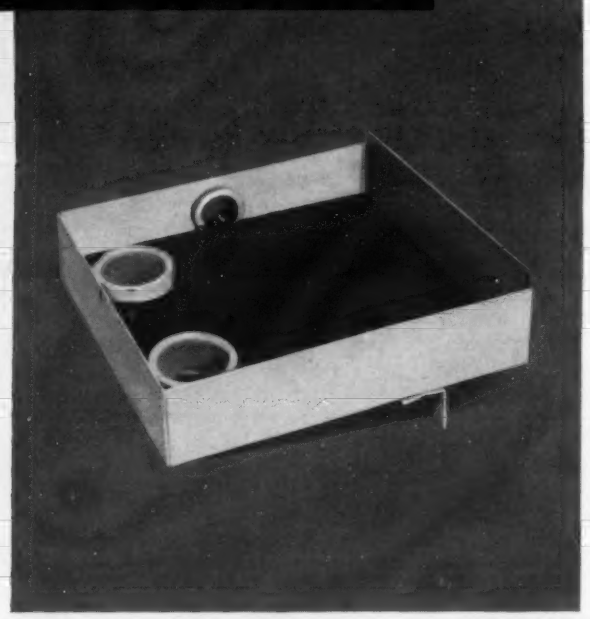
"The causes of corrosion are many in number. Principal among them, almost as with scale but with a different cast of characters, are: (1) concentration, (2) temperature, (3) circulation, and (4) catalysis.

"The chief cause of corrosion in steel boilers is the attack of dissolved oxygen on hydrogen ions which have plated out on the steel in a previous minor corrosion step.

"The mechanism of this corrosion is abetted by heat moisture, and circulation velocity. The corrosion will proceed apace as long as oxygen is pres-

WITCO SEALERS FOR AIR-CONDITIONING AND REFRIGERATION APPLICATIONS

Careful testing of all Witco products means uniformity and high quality for you. Here, a lab technician checks a sealer with a penetrometer. This and many other tests check every characteristic that is vital to performance. Every sealer shipped must meet Witco's high standards and perform faultlessly for you.



Witco's sealers and vapor barriers are specially designed for air-conditioning and refrigerating applications. Good flexibility and excellent adhesion are exhibited over a wide temperature range (from below freezing to abnormally hot temperatures). Formulations to meet special application requirements are manufactured to customer order.

WITCO PRODUCTS ASSURE TOP QUALITY AND PERFORMANCE

Providing products especially suited to particular jobs is just one way Witco assures top performance. Take Witco's Plastic Sealer 320, for example. This material is an all-purpose sealer used where hard, dry films are required. It is stainless, tasteless, odorless and forms air-tight, positive seals.
Pioneer 14442 is a hot-applied sealer with odor level and moisture resistance that make it ideal for refrigerators, freezers, food-vending machines and water coolers. Pioneer 2205 also can be used in these applications. It is a high-melting-point sealer and retains high cold flow and flexibility at low freezing temperatures; it also assures good adhesion and excellent sealability.
The big reasons behind Witco Products' superiority are research and quality control. Every Witco Product is produced under the kind of strict laboratory quality control that assures uniformly high performance from shipment to shipment, year to year.
Witco's research laboratories and technicians not only develop new and improved products, but are available to help you with special problems. Write or call the nearest Witco sales office listed below for further information about these products and for information on sealers for other specialty applications.

SEE OUR CATALOG IN SWEET'S

WITCO CHEMICAL COMPANY, Inc.
PIONEER PRODUCTS DIVISION
Dept. 84-01, 122 East 42nd Street, New York 17, N. Y.
Sales Offices: New York • Chicago • Los Angeles • Toronto and Montreal, Canada

air conditioning
BY PASS VALVE

Simplifies installing fan-coil or induction type air conditioners. Only ¼ size of average valve cluster, it combines function of inlet-outlet valves and flushing valves. Available with ½" or ⅜" solder or flare connections.

CLAYTON MARK & COMPANY
1900 Dempster St.
Evanston, Ill., U.S.A.

ent," declared Prof. Grogan.

"The problem of operating a potentially dangerous piece of equipment around the clock with a minimum of operator know-how and attention to duty has concerned owners, insurance companies, and boiler manufacturers, alike, since the advent of the age of steam.

"In order to be reasonably safe at all times, a boiler must be protected against unusual conditions with respect to (1) ignition, (2) water level, (3) steam pressure, and (4) furnace atmosphere," he continued.

"Particular mention should be made of the hazard of lighting off an oil-fired boiler with cold oil. Several repeated failures to ignite can lead to an explosive accumulation of oil in the furnace when ignition finally occurs.

"The indirect cause of furnace explosion in these instances is the cold fuel oil, but the direct cause is the operator's failure to realize how much fuel energy he is pouring into the furnace with the oil-temperature switch by-passed. The burning of waste in the furnace between misfires can help eliminate this cause of failure," suggests Prof. Grogan.

Fort Worth--

(Continued from Page 1, Col. 4)

been removed and "who does what" spelled out.

Participating in the meetings were two representatives from the local chapter, American Institute of Architects, North Texas Chapter, National Association of Electrical Contractors, consulting engineers, Associated General Contractors of America, and Associated Mechanical Contractors of Fort Worth, Texas, Inc.

The written agreement of the 15 resolved items follows:

● **Painting of mechanical work.** Applicable to the mechanical section of the specifications. Same applies to electrical section by changing of the word mechanical to electrical.

All painting required of mechanical items in boiler rooms, fan rooms, equipment rooms, or similar areas where there is a heavy concentration of mechanical equipment will be done by the mechanical contractor.

All finished painting throughout the remainder of the building after being cleaned and primed by the mechanical contractor will be done by the general contractor's painter.

The rooms where painting of mechanical items is to be done by the mechanical contractor will be spelled out by room number or name in both the mechanical and the painting section of the specifications.

● **Guaranty-warranty.** Each contractor shall furnish a guaranty covering all labor and material for a period of one year from date of final acceptance of the building, which shall include the agreement to repair and replace any and all defects which may appear in his work during that time, which in the judgment of the architect and/or engineer arise from defective workmanship or imperfect or inferior materials. Nothing in the above intends or implies that guaranty shall apply to work which has been neglected or abused by the owner.

The above is to be incorporated in the general and special conditions of the specifications.

● **Bid opening time.** Insofar as possible, bids will be requested not earlier than 2 p.m. on Tuesday through Friday.

● **Temperature control wiring.** Under electrical section of specifications.

The electrical contractor will provide power to the various locations as shown on the electrical plans, terminating with fused disconnects for continuation by the temperature control contractor under another section of the specifications.

This contractor will check the temperature control section of the specifications with other sections and include in his bid complete wiring of all items not included in the temperature control section.

In general, all wiring not by the temperature control contractor will be by this contractor.

Under mechanical section sub-paragraph temperature controls. The control contractor shall employ a qualified electrical contractor to do the wiring of all apparatus furnished by him from the termination disconnects furnished under the electric contract shown on the electrical plans. He shall check the electrical specifications and plans for these locations.

Note: All control items to be furnished by the control contractor shall be included in the control section such as boiler resets, centrifugal machine controls, temperature control of walk-in freezers, etc.

● **Handling of motor starters, etc.** State in the mechanical and electrical sections of the specifications. All motors and starting apparatus furnished by the mechanical contractor as separate items from the equipment they service will be delivered by the mechanical contractor to the electrical contractor properly identified at one time to an agreed point at the ground floor level of the building.

If so required by the mechanical contractor, the electrical contractor will sign an itemized list of equipment received and assume complete responsibility for installation of equipment received.

However, nothing in the above relieves the mechanical contractor from the responsibility of furnishing the correct apparatus at the proper time and checking same after installation for proper adjustment, alignment, installation, and final operation.

● **Cleaning.** Each trade to be responsible for its own debris and its removal.

● **Temporary sanitary facilities.** To be provided by the general contractor.

● **Temporary lighting.** The temporary electric power and lighting for construction purposes for all crafts to be furnished and paid for by the general contractor.

● **Temporary water.** To be provided by the general contractor.

● **Drinking water.** Each trade to provide its own.

● **Hoisting.** Exact wording of this item was not agreed upon; however, it was agreed that on a job where a hoist was needed, the architect would spell out in the specifications the type, size, and capacity of the hoist which would be furnished by the general contractor.

● **Cutting and patching.** All cutting and patching on new construction shall be done by craft requiring same. All cutting and patching on remodeling work shall be done by the general contractor.

● **Watchman.** The general contractor shall employ sufficient competent watchmen that the work will be under the protection of a responsible person at all times that work is not actually in progress. The watchman shall provide protection for all materials, tools, and items of equipment on the site but the general contractor shall not be held liable for the loss of any items belonging to other contractors or subcontractors.

● **Bond.** When a performance bond is required, it will be a performance and *payment* bond.

● **Builder's risk insurance.** The specifications will state specifically who is to carry the builder's risk insurance.

"With 15 items resolved," the announcement said, "the group feels that much has been accomplished, that a better understanding of the problems of other segments of the construction industry has been achieved by over-the-table discussions, and that review of other problems and their solution is possible.

"Several were even optimistic that the sticky bid taking methods, now in the Council deep-freeze, would be placed on the agenda again for further consideration."

Horace W. Butts of O. J. Butts Plumbing Co. is chairman of the group and Horace O. Duncan, general contractor, is co-chairman.

CRS Offers 'Unique' Leasing Arrangement For Stratonic System

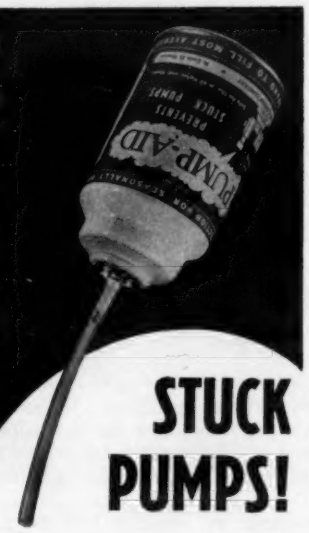
PHILADELPHIA — What is termed "a new and unique type of leasing arrangement" has been instituted by CRS Industries, Inc., for its "Stratronic System" of dirt and dust control.

The charges for leasing, according to William C. McMichael, director of sales, are based on an experience chart showing the savings in maintenance costs which follow the installation of the Statronic System in a building.

McMichael stated: "Our studies show that the heavy maintenance costs required to keep the interiors of buildings clean—including supplies, laundering, and janitorial personnel —are drastically reduced after the Statronic installation. We have computed the approximate savings and, based on these averages, have fixed the leasing charges at a rate lower than the amount to be saved."

The Statronic System is an electronic method of particulate bombardment and negative ionization of dirt and dust particles in the air stream.

PREVENT



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GET USE PROVEN

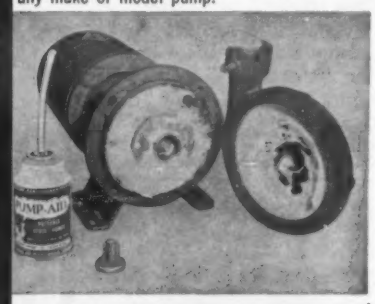
PUMP AID

th New, Improved Features.

A new RUST INHIBITOR . . . which VAPORIZES and reaches into the smallest crevices.

CONTROLLED FOAM ACTION . . . provides full seasonal protection without foam at start up time.

w is the time to prevent stuck pumps . . . iminate consuming repairs next spring. After aining pump, simply inject PUMP AID into mp housing through drain hole. Aerosol packed PUMP AID E-X-P-A-N-D-S to cover all inter- surfaces. At start-up time — just throw the itch and your pump is running. PUMP AID is ter soluble and washes away. May be used any make or model pump.



PUMP AID... PREVENTS CORROSION • PRESERVES SEALS • WILL NOT FREEZE • WILL NOT EVAPORATE • IS WATER SOLUBLE • IS NOT TOXIC • IS EASY TO USE • IS REASONABLY PRICED

Order by the case of twelve cans today from your dealer and be prepared when shut-down time comes.

Or write . . .

THE GARMAN CO.
1253 GROVER RD.
ST. LOUIS 25, MO.

REMCOR Model CB-2A

WATER COOLER
5 Gallon Bottle Type

$89.50*

*TO DEALERS ONLY

. . . economical . . . efficient . . . streamlined . . . space-saving . . . ¼ H.P. Tecumseh hermetic unit . . . five year warranty on refrigeration cycle. . . .

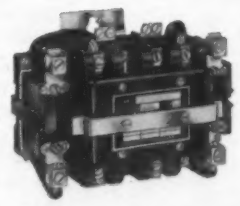
Remcor Products Co.
321 E. Grand Avenue
Chicago 11, Illinois
manufacturers of water coolers since 1940

also available:
10 Gallon Pressure Type Cooler
*$139.50

ARROW-HART

50 AMPERE, 2, 3 and 4 POLE STARTER 240 VOLT AC 34500 SERIES

For All Commercial Air Conditioning and Refrigeration Applications



2 AND 3 POLE 5½"

Reliable service and protection for air conditioning and refrigeration compressor motors. Will last the lifetime of the unit on which they are installed. Outstanding in design and performance features: small size, straight-thru wiring, slotted mounting holes, extra heavy contacts and additional terminals.

Write for Folder (Form No. A-239) giving details covering 30, 40, 50, and 60 amp. starters and contactors to The Arrow-Hart and Hegeman Electric Co., 103 Hawthorn St., Hartford 6, Conn. Dept. ACHRN

ARROW AH HART

Quality since 1890

MOTOR CONTROLS • WIRING DEVICES • ENCLOSED SWITCHES • APPLIANCE SWITCHES

Statehood, Jets Accelerate Burgeoning Air Conditioning Business In Hawaii

EDITOR GEORGE F. TAUBENECK is in Hawaii as one of the featured speakers at the "Gibson Waikiki College of Profit" being held in conjunction with its sales incentive tour and convention project. While there, Taubeneck is reporting on the air conditioning, refrigeration market in our newest state.

By George F. Taubeneck

HONOLULU, Hawaii — Prosperity is busting out all over in this newest state of our Union.

Especially is this true of air conditioning and refrigeration purveyors on these happily Golden Isles which comprise our 50th State. As Van O. Darrow, vice president of Honolulu's Air Engineering Co. puts it:

"Future prospects look promising. We are enjoying a building boom at present. Our economy is based on military subsidies, food exports, and tourists—that order. Of the three industries, tourism is the fastest growing.

"1960 sales of refrigerated items have compared quite favorably with 1959 and 1958. Generally speaking, this industry's sales are 10% above 1959.

"Mainland manufacturers can help promote and service the Hawaiian market by building more serviceable equipment and striving to develop products better adapted to tropic lands.

"It is quite a thrill to be able to vote for a President of the United States for the first time, and to realize that our Senators and Representatives at last will have influence in Washington.

"Statehood seems to have affected mainland people more than it has our loyal citizens, however. Shortly after Statehood was achieved, there was a great influx of mainlanders arriving in Hawaii, looking for positions here."

Sees Growth In Room Unit Sales

Adds Robert Nakota, of the Oahu Sales Co.:

"I see definite growth in window-type air conditioning business, especially in its residential market. The commercial air conditioning field will follow rapidly. More construction means more air conditioners."

"Our refrigeration business is somewhat steady. We are depending on increased activities by supermarket operators for growth in this sector.

"Sales volume has increased this year, especially in room air conditioners. My firm will move at least 2,000 such units in 1960, which is a jump above total sales of 1,700 in 1959.

"Since we became the 50th State, and following the inauguration of jet airplane service, all U.S.A. manufacturers are giving us better service and understanding."

Reports Walter Hamoda:

"I have been in the refrigeration trade for about 30 years; 17 of those were spent working for one of the largest refrigeration companies in Hawaii.

"Fourteen years ago I started my own business as a service organization only. Early in 1958, I branched out in sales.

"During 1957, my service gross income was over $30,000; in 1958, when I went into sales, service intake increased to $40,000, and sales to $70,000.

"My sales so far this year have amounted to around $70,000, and I am expecting another $40,000 to $50,000 in sales and $60,000 in services before 1960 ends.

Tremendous Building, Industrial Growth Cited

"The State of Hawaii is in process of tremendous building and industrial development. Adding to this prosperity is the Jet Age, which brings us so much nearer the Mainland.

"All mainland companies have been very cooperative in sending literature and helpful in answering correspondence promptly. Some of the companies that I am dealing with now are Scotsman, Queen Products, Div. of King-Seeley Corp.; Victory Metal Mfg. Corp., Bally Case & Cooler Co.

"Since Hawaii became a State, the attitude of business people from the other States is returned in kind, and the future of the coming generation, businesswise, looks very bright."

Declares Richard Souza of the Hawaiian Electric Co., Ltd.:

"The air conditioning industry of Hawaii is experiencing steady growth. In the area of commercial air conditioning (offices, shops, stores, hotels, etc.) this growth is tremendous.

Most New Construction Plans Conditioning

"Virtually all new commercial buildings now on the drawing boards provide for air conditioning. Many older establishments also are installing air conditioning.

"Businessmen here are realizing the importance air conditioning has relative to attracting customers to their establishments. Residential air conditioning is not experiencing the same general acceptance as commercial air conditioning, however.

"The percent of saturation of homes in our service area is only 2%, so you can readily see that this market is barely scratched. This is an area which definitely needs sales promotion assistance from mainland manufacturers.

"Most distributors believe that a realistic cooperative advertising program on air conditioning would help immensely."

Sales of room units in 1960 are running approximately 42% ahead of 1959.

Free Installation of Room Units Pays Off

A room air conditioner promotional program for homes—featuring free installation and a "Pick the Weather" contest—was conducted successfully this summer by the Electrical Association.

That offer of "free installation" seemed to pay off, inasmuch as sales of room units to homes showed an increase of 68% over last year.

Objective of the drive, which ran from June 5 to Aug. 31, was to boost the idea of residential air conditioning by the simplest means.

The free installation phase of the program was formulated by the Electrical Living Committee. Three contractors agreed to do all residential installations of room units at flat rates.

Installation proposals were submitted by Bob Kaya, general contractor and home improvement specialist; Jerry Nishimoto, general contractor; and Charles Korte, refrigeration service specialist.

Each participating distributor selected the contractor of his choice to do his installation work. All charges were transacted between the distributor and the installation contractor involved.

To help promote the program, the *Honolulu Advertiser* developed the "Pick the Weather" contest. This was designed to lure consumers into retail stores.

Contestants were asked to predict how hot it would be at noon on August 1, fill out the entry blank to be found in *The Sunday Advertiser,* and then complete this statement: "I want a room air conditioner because. . . ." Prize was a 1-hp air conditioner installed in the winner's home.

Entry blank and all advertisements carried the advice: "Ask your dealer all about room air conditioners. His answers may help you write a better contest essay—and help you find the way to healthful, cool comfort in your home."

Dealers Urged To Have Showrooms Prepared

Dealers were urged to "get that room air conditioning display out front," use the window streamers furnished them, dress their windows to feature air conditioners, "talk it up" on the floor, look over the factory brochures to "know what you are talking about," employ and use such gimmicks as a giant thermometer prominently situated in the showroom.

The contest drew hundreds of entries. Several contestants tied in their on-the-nose temperature predictions (not difficult to do in even-tempered Honolulu). Judges then selected Mrs. Lani Ching as the winner on the basis of her "I want because" statement.

Promotion for the over-all promotional program featured half-page displays on the back page of *The Sunday Advertiser's* Better Living Section. In addition, each of the 12 participating distributors bought five 10-in. minimum size ads. These were placed in the radio log pages of both the *Honolulu Advertiser* and the *Star.*

All advertisements featured FREE INSTALLATION, and contained a Live Better Electrically drop-in.

Utility Paid $15 Of Installation Cost

Utility assistance also was forthcoming. The Hawaiian Electric Co., Ltd. covered the cost of a "kickoff" dealer breakfast, and the contest winner's prize.

This progressive utility contributed $15 toward the installation of each unit.

Inasmuch as central home heating isn't needed here, all-year residential systems are not promoted. Window or through-the-wall units do the job on the Golden Isles.

FRESH AIR from air conditioners
FRESH AIR from furnaces
FRESH AIR from air purifiers
FRESH AIR from kitchen hoods
FRESH AIR from refrigerators
FRESH AIR from dehumidifiers
FRESH AIR from freezers

with

ACTIVATED CHARCOAL

It's easier to remove odors than ignore them. Build in air purification as a feature on your next model. It's the next step in improved sales appeal.

Barnebey-Cheney designs and fabricates all types of standard and special activated charcoal filters, both reusable and throw-away types, or will supply the most desirable grade of bulk charcoal for use in filters of your own make.

Write for bulletin T-363. Barnebey-Cheney, Columbus 19, Ohio.

Barnebey Cheney

Send for FREE Booklet describing

SHAFTS *by* MODERN

Uniform in quality, precision machined to closest tolerances, Shafts by MODERN now power compressors for the nation's leading lines of refrigeration and air conditioning units.

MODERN MACHINE WORKS, INC.

Manufacturers of Crankshafts, Eccentric Shafts, and Straight Shafts SINCE 1924

5354 S. KIRKWOOD AVENUE • CUDAHY, WISCONSIN

DeVilbiss Foam-In-Place Insulation Spray Unit Mixes Materials Outside Gun

A SERIOUS, not frothy, discussion of foam is under way here at the spray painting school of The DeVilbiss Co. in Toledo. Instruction in the techniques of applying rigid urethane foam for insulation, corrosion control, and other uses is being given at the factory and in the field by the company. Here Instructor Frank Foust explains the DeVilbiss two-compnent spray gun to interested applicators, from left: Glen Hartsell and Ray Medoins of Detroit; Otis Videen, Cloquet, Minn.; and Forest Schaekel, Rossford, Ohio.

TOLEDO—The spraying of foam-in-place insulation can be accomplished with a five-piece DeVilbiss unit priced under $2,600, H. M. Kidd, vice president-sales of DeVilbiss Co., has announced.

Pointing out that his company has worked for several years with manufacturers of raw materials for the new foams, Kidd said the biggest hurdle was overcome more than five years ago with the development of a two-component spray gun which mixes the materials outside the gun.

"The exclusive DeVilbiss design which enables the mixing of fast-setting components after they leave the gun nozzle eliminates any pile-up or clogging of the gun and the need for a purge cycle," Kidd explained. "Cleaning a foam spray gun and unit is no more complicated than cleaning a spray painting unit."

This outside mix feature also opens the way for spraying other catalyst-type materials which are now under test and will rapidly reach the marketing stage," Kidd revealed in his announcement.

The foam spray unit includes a 6 kw paint heater with attached air transformer, two 10-gal. catalyst type pressure feed tanks, a 2-gal. cleaning tank, and two component catalyst spray gun, and the necessary special hoses and attachments, according to the firm.

The quoted price also includes a pliofilm hood respirator for operator use.

COMPRESSOR DESIGNERS

ENGINEERS

MANUFACTURERS

KNOW YOUR

PISTONS

Did you know that Gillett & Eaton Vanasil pistons absorb oil to run with less friction? In addition to this hypereutectic aluminum alloy, G & E makes other aluminum, hi-tensile iron and bi-metal pistons in all sizes and shapes. Write for information on the performance you can expect from each type—specify your compressor use.

GILLETT & EATON, Inc.

861 Doughty Street, Lake City, Minn.

Sold in Canada by
Gould National Batteries of Canada, Ltd.
Fort Erie, Ontario

Piston and casting specialists

Established 1868

Bohn Expands Danville Plant

DANVILLE, Ill.—As a result of a successful campaign for an ever-increasing sales volume, Bohn Aluminum & Brass Corp. is expanding the plant facilities of its Danville Div., the company announced.

According to H. Blake Thomas, Bohn vice president and general manager of the Danville Div., construction is now under way on a 28,000-sq. ft. plant addition, plus 2,000 additional square feet of dock space.

Completion is expected before the end of the year and will bring the total plant area of this division to 171,000 sq. ft.

"Since establishing its operation in Danville in July of 1956, Bohn has steadily increased sales volume through expanding its product line and strengthening sales distribution," the announcement said.

"Today, the Danville plant manufactures a complete line of heat transfer equipment for heating, air conditioning, and commercial refrigeration."

Thomas pointed out that this growth has also involved a continuous major tooling program, rigid quality control, and accelerated production to insure faster execution of orders.

Norge Appoints Ashby Engineering Director

CHICAGO — Carl T. Ashby has been appointed director of engineering for Norge refrigerators and home freezers, V. C. Rice, vice president of manufacturing and engineering of the Norge Div. of Borg - Warner Corp., announced recently.

C. T. Ashby

Ashby resigned as president and director of engineering of Conrad, Inc., environmental test equipment manufacturer, Holland, Mich., to join Norge.

With headquarters at the Norge Muskegon Heights, Mich. plant, he will report to E. K. Anderson, Norge vice president in charge of Muskegon Heights and Muskegon operations, Rice said.

Holder of a Ph. D. in physical chemistry and a number of U. S. patents, Ashby was president of Conrad since March, 1956.

Presstite Promotes 3 Factory Executives

ST. LOUIS—Advancement of three executives in the Presstite Div., American-Marietta Co., was announced by the division president, Cyril H. Smith.

Tom Cyphers, St. Louis plant superintendent for the past six years, has been promoted to manager of Presstite's Jackson, Mich. plant. Cyphers has been with Presstite for 24 years.

Larry Ladd becomes St. Louis plant superintendent succeeding Cyphers. Ladd has been with Presstite for eight years in engineering and methods. He set up operations at Presstite's El Segundo, Calif. plant which was established approximately two years ago.

Warren Wepfer, assistant plant superintendent in St. Louis, has been assigned to the El Segundo plant where he will take over duties as assistant plant manager. He has been with Presstite for 12 years.

Hart and Cooley Expands Warehouse Facilities

HOLLAND, Mich. — Under way at the Hart & Cooley Mfg. Co. plant here is a construction project which, when finished, will contain more than 912,000 cu. ft. of space to be devoted to the warehousing of its "Metlvent" line of gas vent pipe and fittings.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

Recold Announces First Phase of 40% Plant Expansion To Double Production

LOS ANGELES — Recold Corp. has announced that the first phase of a 40% plant expansion program and a change in production procedures aimed at doubling output of its air conditioning and refrigeration product has been completed.

The first phase—the addition of 49,000 sq ft to the present plant—has just been finished, and the change-over in production procedure, the second phase, is scheduled to start soon, reports H. T. (Hy) Jarvis.

The additional space in the plant brings the total square footage to 169,000. The Recold plant is located on a 13½ acre site and Recold officials point out that this still leaves ample room for more expansion.

The basic change in the production system, according to Carl Baumhofer, works manager, "is the creating of a line flow by separating copper fabrication from steel fabrication and placing supporting fabrication in the center."

Baumhofer explained that prior to this Recold's production system was departmentalized by the kind of product in fabrication.

Some of the new equipment to be used in the changeover includes presses to increase the current capacity of fin fabrication and of copper header fabrication; a 200-ton blank and form press; a 300-ton press brake; a Wales fabricator, and two 60-ton blank and form presses.

THIS

COMPLETE CONTROL FAMILY

is especially engineered for the air conditioning industry (including heat pumps)

by RBM

TYPE C-30, C-40, C-50 CONTACTORS
2-3-4 pole 30 amp.—600 volts.
2-3-4 pole 40 amp.—230 volts.
2 pole 50 amp.—230 volts.
Same mounting holes and coils for all ratings and pole forms.
Write for Bulletin 1070.

TYPE S-30, S-40 CONTACTORS
Rated 30 or 40 amps. Low cost, small size. Exceeds rigid requirements of industry's largest users.
Write for Bulletin C-10.

TYPE 80 CONTROLLER
Specific design for nominal 3 HP or 3-ton single phase compressors.
Write for Bulletin C-11.

TYPE 75 POWER RELAY
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SERIES 129000 SHUNT TYPE RELAY — SPNO, SPNC OR NO-NC
For standard commercial voltages. Other coils available for special application. For heater, fan control, general circuit switching, etc.
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GENERAL PURPOSE RELAY
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Mathes 1961 Models--

(Continued from Page 1, Col. 5)

There, additional meetings were conducted in the fields of engineering, parts and warranty programs, sales and field engineering training.

According to Starnes, the entire presentation meeting "was a complete success for Mathes with greater than $2,000,000 in order commitments for immediate shipment received during the active two-day session."

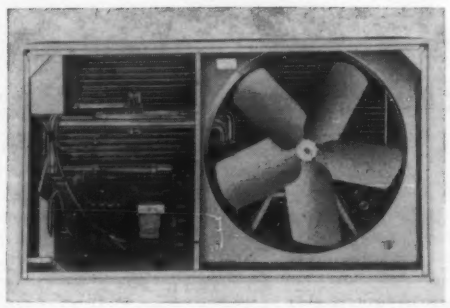
He also announced that Mathes will immediately increase the size of its field sales force. He added that "a great number" of distributors and dealers who are seeking to sell Mathes equipment in several new markets have already contacted the Mathes sales department.

Topping off the whole Mathes "On Target" theme, Starnes said, are "very attractive prices." He said the new prices announced to take effect immediately on all of the company's products "are the most competitive ever offered at any time by Mathes."

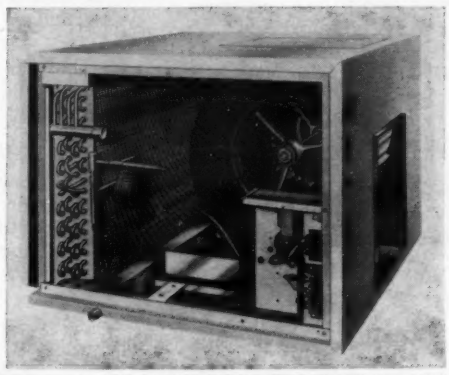
C. Jack McDonald, chief engineer at Mathes, presented a greatly-broadened line of remote air-cooled condensing units, coils, and blowers, including package units and split systems and packaged heat pumps.

McDonald described in technical detail the newly-designed all-aluminum "Alklad" outdoor housings which are incorporated throughout Mathes' 1961 line of residential-commercial-industrial equipment.

He claimed that the Alklad aluminum housings "lend themselves to greater, longer-lasting beauty, and in addition, permit greater ease of handling not only in factory production but also in the field by permitting easier and faster handling of access panels, etc. for installation and servicing."



MATHES 15-ton heat pump condensing unit, with access covers removed, showing all interior component parts including new four-way transfer valve.



CONVERTIBLE evaporator blower with access panel removed showing special check valve jet assembly, standard on all Mathes blowers whether cooling or heat pump.

All of the new all-aluminum housings are in very heavy gauge hard aluminum in a decorative embossed pattern, which is featured, commencing immediately, in all Mathes' condensing units and hermetic air-cooled package units, all of which are designed for outdoor installation, it was stated.

The New Equipment

McDonald presented a range of capacities in cooling equipment beginning with a 2 hp unit of 22,000 Btuh, with sizes throughout the range of tonnage including a 15-ton single compressor, air-cooled condensing unit.

A full line of air-source, air-to-air, split-system outdoor mounted heat pump units were introduced in capacities begining with a residential 30,500 Btu heat pump with tonnages available through the single compressor 15-ton heat pump system, the company said.

Two completely new condensing unit sizes added to the line were shown. They are a single compressor 42,000 Btu unit (model 42HAR-HP-1L) and a single compressor 48,000 Btu unit (model 48HAR-HP-1L), each designed for residential or commercial application and the 42HAR unit featuring the newly-developed internally sprung high-speed Tecumseh hermetic compressor.

According to Mathes Sales Manager Claude Birdsell, these two sizes have been added to Mathes' line in order that Mathes distributors can take advantage of the capacity range which throughont the industry has been showing the greatest sales increases, according to ARI statistical reports, during the past year.

A new designed series comprised of five horizontal air-cooled hermetic package units in both cooling and heat pump types were also presented by McDonald.

These units range in capacities from 2 hp 24,000 Btu (ASRE) through the 5-hp model at 58,000 Btu (ASRE), it was stated. They are designed for outdoor or through-the-wall mounting in residential or commercial application. All units feature integral "pre-wired at the factory" remote control circuits and are shipped including heat-cool thermostat, the company said.

Highlighting this line of packages is a new 4-hp, 42,000-Btuh cooling unit, plus a newly-added 3-hp model, specifically designed for volume installation in tract housing or shopping center applications, etc.

Heat pumps featuring optional supplemental electric resistance heat packages, which are available either factory installed or are installed in the field, with the five newly-designed models were unveiled. These units all feature automatic heat-cool changeover thermostat and fully automatic 100% hot gas defrosting.

"Two sizes newly added in the Mathes line of package heat pumps are the model 32HAH-Hp-1L and model 42HAH-HP-1L, the latter of which incorporates the new high-speed internally sprung with internal overload protection Tecumseh compressors which permit a reduction in overall physical size of this type of unit," it was pointed out.

Expand Room Air Conditioners

Mathes 1961 line of room air conditioners has been expanded from seven models comprising the 1960 line to a total of ten basic models.

Added to the "Gold Medallion" custom line is a new "high capacity," 1-hp heat pump unit, companion to the model 1350C-1 cooling unit, which has a rated capacity of 13,500 Btuh (ASRE).

Also added is a 2-hp heat pump, model 2390CHP-1. This unit is the all-season, all-electric heat pump version of Mathes' straight cooling unit, which develops 23,900 Btuh at ASRE conditions (ARI 110-58), according to the company.

Highlighting the room air conditioner line is the newly-designed model 3161D-1. This unit develops "approximately 31,600 Btuh, rated in accordance with ARI Standard 110-58."

The unit was presented featuring a 2½-hp compressor and all-aluminum housing having removal access panels for outdoor servicing, while the unit remains "in place" in its installation. Local controls giving separate automatic thermostatic control, along with two-speed fan control, were featured.

Shown with Mathes' ebony-white decorative front, incorporating three four-way adjustable air deflection louvers, the unit is also available in handrubbed mahogany and tropic decorative fronts.

Installation of this unit is claimed by Mathes to be easily and quickly accomplished using an installation kit (furnished) made up of heavy aluminum angle braces which permit flush mounting of the unit, or, by means of a simple rotation of the braces, the unit may be installed, if desired. projecting into the conditioned area approximately 12 in.

Local or Remote Controls

This unit is provided with local controls or with remote controls, and in straight cooling or full automatic heat pump. It can be plugged into a wall outlet since it is furnished with a heavy duty electric range type cord set.

Supplementary electric resistance heat is standard built-in equipment in all Mathes heat pump room air conditioners, including the new model 3161DHP-1 which is equipped with 19,000 Btuh strip heating elements.

E. H. Schwartz, Mathes vice president of engineering, presented Mathes' plans for future engineering development in a message entitled, "Engineering Creativity in Orbit."

Schwartz pointed up the great strides in air conditioning design development and outlined both Mathes' contributions to the industry in prior years and the company's future planning in new product development.

C. A. Sewell Dies, 25 Years In Coil Mfg.

METUCHEN, N. J.—One of the heating, refrigeration, and air conditioning industry's widely-known figures, Cleveland A. Sewell, died Aug. 29 at the Roosevelt hospital here after a long illness.

His body was returned to his family home in Georgia for burial by his widow, Lois Sewell.

Sewell started in the refrigeration coil business some 25 years ago with the Larkin Co. in Atlanta. He came to the New York City area for Larkin and set up a coil plant on Fifth Ave. Then he moved to the American Coil Co. in Newark, N. J. as a vice president.

Sewell became associated with Monroe Seligman, currently president of Tenney Engineering, Inc. and, together, they formed the Sewell-Seligman Co. in Newark. In 1945, along with Seligman and Saul S. Schiffman, he joined Tenney and was appointed vice president of engineering and manufacture of the environmental test equipment division and the refrigeration division. Sewell was co-inventor of the Tenney thermostatic expansion valve.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.

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NWAHACA Convention--

(Continued from Page 1, Col. 2)

Sales and Marketing Forum will be scheduled. At the same time, the Application Engineering Council, the Research Advisory Council and the Marketing Council of the Association will be conducting meetings which will be open to association members.

Among the highlights promised for the Dealer-Contractor Sales and Marketing Forum are progress reports on the Silver Shield Program and the introduction of the association's new Dealer Management Training Program which is now being developed.

On Tuesday, Nov. 15, a day-long "Application Engineering Session" will be conducted, open to all segments of the industry. At this session will be reported the results and evaluations of the current research projects being conducted in the association's Research Residence No. 4, together with discussions of other subjects of pertinent technical interest to the industry.

Concurrent with this session, a "Manufacturer's Marketing Session" will be conducted, dealing with subjects of specific marketing interest to manufacturer members of the association and industry.

The Wednesday, Nov. 16 morning session, will be an "Association Affairs and Management Session" for the voting members of the association, at which will be reported and discussed the progress of the association's work in research, trade education, and public information during 1960, and the election of officers and board members. On Wednesday afternoon the association's Board of Trustees will begin its annual meeting.

Besides many informal social gatherings there will be a convention gala get-together for all delegates and their wives on Monday evening (Nov. 14). Cost of this affair will be included in the registration fee.

Another highlight of the convention will be the Tuesday (Nov. 15) luncheon when a national speaker will address the group.

Martin said that advance registration, with billing directly to the person's business address, will be made available this year for the first time.

A 15-member Cleveland committee to assist in the arrangements for the convention has been appointed, it was announced by Harry C. Gurney, NWAHACA president. Preliminary estimates indicate that nearly 600 business executives will attend the annual meetings.

Gurney said the Cleveland committee would supplement the work of the headquarters staff. Irv. E. Seith, sales manager, Niagara Furnace division, The Forest City Foundries Co., is general chairman of the committee.

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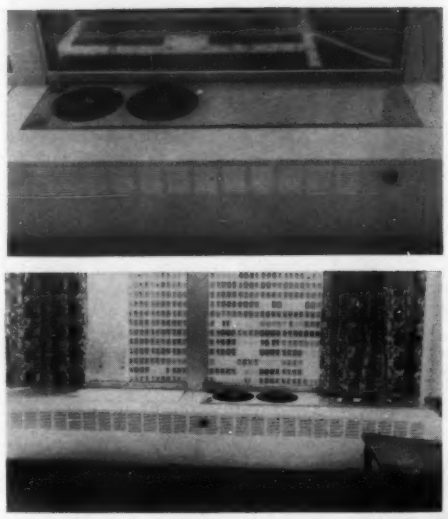
Worthington To Expand Decatur, Ala. Plant

HARRISON, N. J. — Worthington Corp. has announced a major expansion of the production facilities at the company's air conditioning plant in Decatur, Ala.

Construction is expected to begin in November on a 90,000-sq ft extension which will increase the size of the existing 170,000-sq ft facility by over 50%. The new extension is scheduled for completion by 1961.

According to Walther H. Feldmann, president, Worthington's ever-increasing penetration into worldwide air conditioning markets as well as the rapid expansion of its product line have been important contributing factors to the new addition.

NEWS readers are invited to write to the editor giving their opinions on any subject of interest to the industry.



TWO VIEWS of "Curtain Wall" air conditioner developed by Amana Refrigeration, Inc. show how it meets requirements of new curtain wall construction. Long, narrow unit is placed inside insulated ventilating and heating cabinets provided under each window. Heat is exhausted to outside through cast aluminum grilles which are integral part of curtain wall. Grilles also protect air conditioner from sun.

Curtain Wall--

(Continued from Page 1, Col. 2)

dows.

Amana solved the problem, he stated, by designing a new self-contained unit which can be set into place inside the insulated weatherproof ventilating and heating cabinet provided under each window as part of the building structure.

Because the cabinet provides the housing, installation "is a matter of minutes," with the air conditioner replacing a hinged cover. A weatherproof plug-in electrical connection is supplied inside the cabinet.

In shape, the Amana Curtain Wall air conditioner is long and narrow, fitting dimensions prescribed by the weatherproof cabinet. When installed, the unit is approximately flush with cabinet height, except for two decorative plastic grills through which air is circulated.

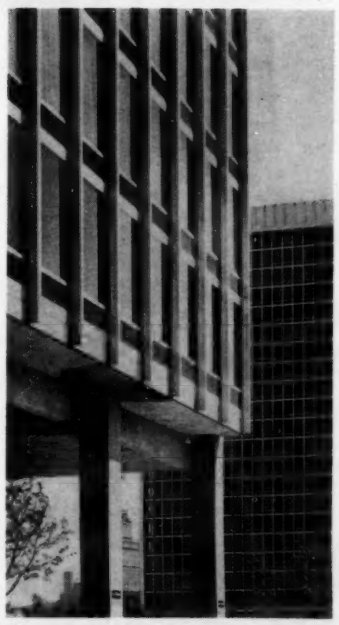
"The air conditioner exhausts heat to the outside through cast aluminum grilles, which are at one time the exterior of the ventilating cabinet as well as an integral part of the outside curtain wall," it was pointed out. "This presents an unmarred facade.

"As typified by the Colonnade Park apartments, the exterior appearance remains unaltered with installation of the new Amana Curtain Wall air conditioning units, since the whole unit is completely enclosed within the building.

"In operation, the air conditioner is similar to standard room unit. Fresh air is provided by a simple damper device attached to the switch mechanism. The control knob is conveniently located atop the unit for high and low-speed fan operation, either in conjunction with, or independently of, the refrigeration compressor.

"A second control knob selects temperature settings which are then thermostatically controlled.

"Unusually high operating efficiency is expected for the Curtain Wall units because of the protection and shading afforded by the aluminum grill which completely shields the air conditioner from the sun. This 'built-in' protection also is expected to lower operating costs and add longer life to the mechanism."



GRILLES are seen at base of each window in new Colonnade Park apartments in Newark, N. J. Flush with curtain wall, they do not mar appearance of building facade.

Technical specifications of the Curtain Wall air conditioner, Model 100CW-8R, follow:

Horsepower—1; Btu capacity (cooling capacity per NEMA standards) — 9,000; voltage — 208; amps — 6.2; wattage — 1,340; CFW—200; power factor—95%; net weight—135 lbs; height—12¼ in.; length—51⅝ in.; depth—12⅛ in.

NFPA Standard--

(Continued from Page 1, Col. 5)

ard No. 90A covers air conditioning and ventilating systems of other than residential type. Standard No. 90B treats residence-type warm air heating and air conditioning systems.

The paragraph on combination systems appears in both standards. It is Par. 193 in 90A and Par. 202 in 90B. It reads:

"Combination units in which a refrigeration coil is provided shall have the refrigeration coil located downstream from the heating furnace, unless the heating furnace is specifically approved for installation downstream from the coil, or the coil shall be located parallel to the heating furnace.

"When the heating furnace is located upstream from the coil, the coil shall be so designed or equipped as to not develop excessive temperatures or pressures.

"In those cases where the coil is located parallel to the heating furnace, dampers or other means used to control flow of air shall be adequate to prevent chilled air from entering the furnace section. If the dampers are manually operated, means shall be provided to prevent operation of either unit unless the damper is in the full heat or cool position.

"Adequate means shall be provided for disposal of condensate and to prevent dripping of condensate on the heating element."

Another addition to Standard 90A provides that stairways connecting two or more stories shall not be used as plenums.

A change in Standard 90B provides for arrangement of the circulating fan to prevent negative pressure affecting combustion air or products of combustion.

Copies of the 1960 edition of the two standards may be obtained at 50 cents each from the National Fire Protection Association, 60 Batterymarch St., Boston 10, Mass.

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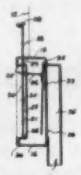
PATENTS

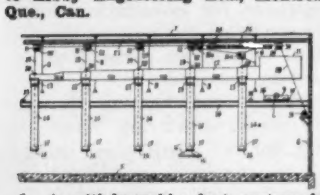
Week of June 7 (Concluded)

2,939,377. HOT AIR REGISTER. Helen Stach, 15273 Fordham, Detroit, Mich.



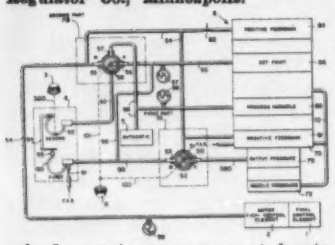
1. In a hot air register, a housing having two vertical side walls, a bottom wall, and a top wall, the top wall having a transverse slot extending from one side wall to the other, said housing including a front frame integrally formed therewith by having the marginal portion of each said wall turned inwardly at right angles to the planes of said walls, and again turned axially inward to form a flange disposed in a plane parallel to said corresponding walls, the frame forming a rectangle of smaller height and width than the height and width of the housing. . . .

2,939,378. WITHDRAWABLE DUCT VENTILATING SYSTEM. Louis Allen Zalkind, Toronto, Ont., Can., assignor to Libby Engineering Ltd., Montreal, Que., Can.



1. A withdrawable duct system for ventilating large open area buildings, comprising a main distributing duct extending along under the ceiling of said building, the said distributing duct having one or more outlets projecting downwardly therefrom, a collapsible duct formed from a continuous tube of flexible material secured to each of the outlets from said distribution duct. . . .

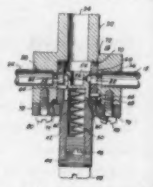
2,939,472. AIR-PRESSURE-OPERATED AUTOMATICALLY OR MANUALLY ACTUATED CONTROLLER. Harold E. Eller, El Paso, Texas, assignor to Minneapolis-Honeywell Regulator Co., Minneapolis.



1. In an air-pressure-operated automatically or manually actuated circuit for operating a final control element, means for shifting automatically between automatic or manual operation without disturbing the value of the air pressure being impressed on the final control element at the time of the shift, said means including, a controller having separate interacting pressure-responsive chambers therein, one of said chambers being a process variable chamber responsive to a pressure representing the instantaneous value of the process variable. . . .

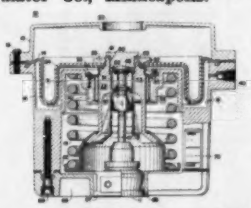
2,939,473. VALVE FOR REFRIGERATION EQUIPMENT. Franklin M. McDougall, 525 N. Crescent Dr., Kirkwood, Mo.

1. A distributor that is usable in refrigeration equipment to receive refrigerant and selectively direct refrigerant to one or more of a plurality of



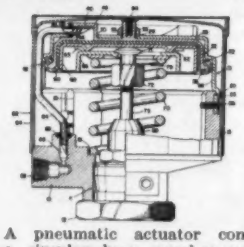
evaporators and that comprises a housing, a recess in said housing, an inlet port in said housing that communicates with said recess and that is connectible to a source of refrigerant, an outlet port in said housing that continuously communicates with said recess and that is connectible to an evaporator, a second outlet port in said housing that communicates with said recess and that is connectible to a second evaporator. . . .

2,939,485. ACTUATOR DESIGN. Robert R. Nanheimer, Chicago, Ill., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis.



5. In combination, a diaphragm type actuator having a diaphragm type chamber and support means enclosing the same, a device to be operated by said diaphragm type actuator and including a movable member, means included in the diaphragm of said actuator having an aperture therethrough and screw means at one extremity thereof, hub means positioned on the moveable member of said device and normally positioned in the aperture of said diaphragm, and connection means including flexible extension means extending into said aperture adjacent said hub, the screw means in said diaphragm operating to move said extension means toward said hub means with the extremity of said extension means being positioned around said hub means connecting said diaphragm and said operating member in operative relationship. . . .

2,939,486. PNEUMATIC ACTUATOR. Peter P. Demay, Chicago, Ill., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis.



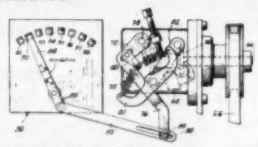
1. A pneumatic actuator comprising, a circular base member with a centrally located aperture therein and a plurality of upstanding flange portions, a first cup shaped member having a shoulder portion intermediate along its peripheral side extent and a plurality of projections which mount on and are adapted to be secured to said flange portions on said base member, a second cup shaped member fitted into said first member and terminating in an outwardly extendinig flanged periphery positioned adjacent said shoulder portion of said first member. . . .

2,939,627. BLOWER MOUNTING CONSTRUCTION. John R. Greiner, Marshalltown, Iowa, assignor to Lennox Industries, Inc., a corporation of Iowa.

1. A blower construction comprising a housing having an air inlet and and air outlet, a fan drive shaft supported by said housing, a fan rotatably mounted within said housing upon said drive shaft, a frame pro-

viding a cross leg extending transversely across a portion of the blower housing, a motor supporting structure secured to said frame cross leg and adapted to fixedly carry a motor for driving connection with said fan drive shaft, and resilient connector means comprising a pair of resilient cushion members fixedly extending from opposite relative upper and lower edges of said frame cross leg and being fixedly secured to said housing. . . .

2,939,974. DRIVE FOR REFRIGERATION EQUIPMENT. Frank B. Knight, La Grange Park, Ill., assignor to McGraw-Edison Co., a corporation of Delaware.



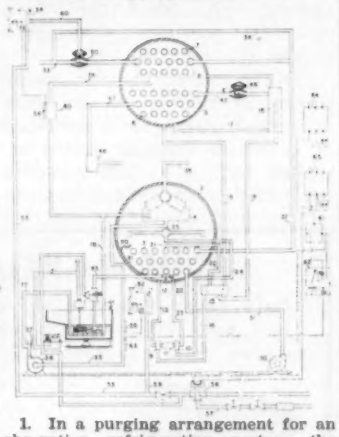
1. In combination in a speed regulating drive, an electrically-energized clutch in which the transmitted torque varies with the degree of electric energization, a governor responsive to the speed of the power-output side of said clutch, a controller for varying the electric energization of said clutch in steps, and a lost motion connection through which said governor operates said controller, said connection imposing at least enough lost motion to accommodate the change of speed of the output side that results from the operation of the controller through one of said steps, said controller being substantially free of any driving force except that exerted by the governor at the two limits of said lost motion....

Editor's Note: Patents described here have been selected from the "Official Gazette" of the United States Patent Office. They offer only a brief summary of each invention. In some instances only the first part of the digest is presented.

Printed copies of patents, reissued patents, and patent designs may be secured from the Patent Office; patents and reissues are 25¢ each, while designs are furnished at 10¢ each. Address orders to: Commissioner of Patents, Washington 25, D. C.

Week of June 14

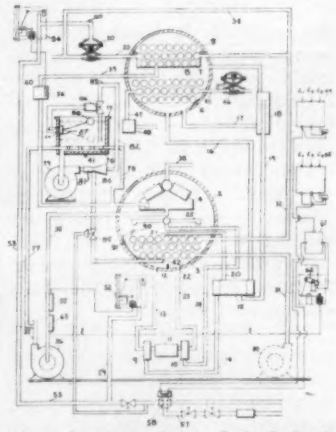
2,940,273. PURGING ARRANGEMENTS FOR ABSORPTION REFRIGERATING SYSTEMS. Louis H. Leonard, Jr., East Syracuse, N. Y., assignor to Carrier Corp., Syracuse, N. Y.



1. In a purging arrangement for an absorption refrigeration system, the combination of a container for an absorbent solution, means for circulating solution in the container adapted to be operatively connected to the absorber to induce non-condensible gases therefrom, means for cooling the absorbent in the container so that it possesses a lower vapor pressure than absorbent circulated in the system. . . .

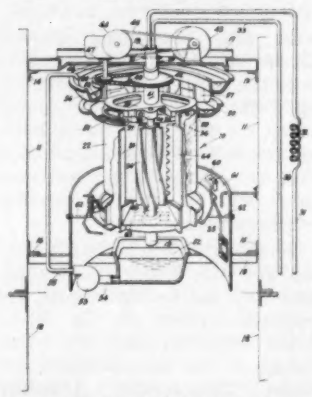
2,940,274. PURGING ARRANGEMENTS FOR ABSORPTION REFRIGERATION SYSTEMS. William L. McGrath, Syracuse, N. Y., assignor to Carrier Corp., Syracuse, N. Y.

6. In a method of purging an absorption refrigeration system including an absorber, an evaporator, a generator and a condenser, the steps which consist in circulating solution in a container to induce non-condensible gases from the absorber and when volume of solution in the con-



tainer increases to a desired level, tilting the container to discontinue operation of circulation means thereby discontinuing circulation of solution in the container and withdrawal of non-condensible gases from the absorber....

2,940,275. ICE BIN LEVEL CONTROL MECHANISMS. Francis M. Raver, Yoe, Pa., assignor to Borg-Warner Corp., Chicago, Ill.



1. In an ice making apparatus including a bin for receiving and storing said ice, the improvement comprising means for discontinuing operation of said apparatus upon a predetermined height of ice within said bin comprising a switch-actuating

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MANUFACTURERS' AGENT now calling on O.E.M. accounts and wholesalers in Southern New Jersey, Pennsylvania, Delaware, Maryland, Virginia and District of Columbia. Desires additional lines in all or any part of this territory. BOX A6644, Air Conditioning, Heating & Refrigeration News.

SERVICE MANAGER — for manufacturer, distributor or dealer — selling heat pumps, air conditioning, gas warm air heating systems and refrigerating equipment. Twenty years' experience, supervising installation and service crews, setting up maintenance contracts, large project work, writing applications and service manuals, conducting service schools. Familiar with casting out and layout work. Will relocate. BOX A6649, Air Conditioning, Heating & Refrigeration News.

POSITIONS AVAILABLE

SALESMEN WITH food sales background for commercial refrigeration sales position with established, aggressive Tyler dealer franchised in 24 California counties. Position offers opportunity to sell full line food and beverage equipment, with all possible selling aids. Monthly draw plus travel expenses. Openings in San Jose main office or branches in Stockton, Salinas, Oakland, South San Francisco, and San Raphael. Send complete resume. A-1 REFRIGERATION, 418 South Second Street, San Jose, California.

SERVICEMAN: COMMERCIAL refrigeration and air conditioning mechanic needed. Guaranteed forty hours per week year-round, no lay-offs. Paid vacations, other benefits. In letter state age, full experience, salary expected, etc. B. L. DAWSON COMPANY, 425 Clark Street, Middletown, Ohio.

MECHANICAL ENGINEER — One of the world's largest pharmaceutical companies offers a recent graduate with several years experience in the air-conditioning, heating and ventilating field interesting and challenging assignments in plant engineering. Experience in trouble-shooting or maintenance of such systems would be a valuable asset. If qualified, please send resume to Personnel Department, PARKE-DAVIS, Detroit 32, Michigan.

MANUFACTURERS' REPRESENTATIVE for complete line commercial and industrial low temperature cooling equipment; heating, ventilating and air conditioning products. Well established nationally known firm desires men with experience and following among engineers and contractors. Territories open in New England, North Central, Midwest, West, Northwest. Give details as to experience, territory you can cover, industry references, other lines handled. Replies held in confidence. BOX A6627, Air Conditioning, Heating & Refrigeration News.

MANUFACTURER'S REPRESENTATIVES for residential and small commercial year-round air conditioning. Twenty-five year old company. Factory southern location. Many desirable territories open. Give details—your present territories, lines, references. BOX A6633, Air Conditioning, Heating & Refrigeration News.

QUALITY CONTROL engineer for refrigeration systems, manufacturer located in midwest, at least 5 years of refrigeration test experience and conversant with quality control procedures related to refrigeration. Please send full details including salary requirements to BOX A6640, Air Conditioning, Heating & Refrigeration News.

AIR CONDITIONING and refrigeration contractor in Cleveland, Ohio is interested in obtaining top level man to organize and head up service department. Sales and administrative ability essential. Our employees have been notified of this advertisement. Reply to BOX A6641, Air Conditioning, Heating & Refrigeration News.

EXPORT MANAGER for prominent manufacturer of air conditioning equipment with worldwide sales. Previous experience refrigeration field or technical educational background helpful. Must have travel experience, prefer multi-linguist, active selfstarter preferred. Location upstate New York. Submit resume and salary requirements. BOX A6645, Air Conditioning, Heating & Refrigeration News.

SERVICEMAN TO cover Philadelphia area. Must be capable of supervision of installations, as well as emergency service of systems. Your home is your office. Send resume, salary desired, when ready to start to work for a progressive organization. BOX A6646, Air Conditioning, Heating & Refrigeration News.

SALES ENGINEER to cover exclusive Philadelphia and New Jersey territory for long established manufacturers' representative handling top lines refrigeration, ammonia and Freon, air conditioning and ventilation equipment. Must have technical background and related experience, preferably under forty. Immediate high earnings against substantial base. BOX A6647, Air Conditioning, Heating & Refrigeration News.

EQUIPMENT WANTED

BRUNNER COMPRESSORS—all models, used and repairable. Send description of model numbers and quantity. Also need other makes used compressors and parts. Will pay cash. UNITED REFRIGERATION CORP., 514 W. 12th St., Los Angeles 15. Calif.

WANTED FOR motel—75 to 100 H.p. standard brand window air conditioning units at reasonable price. BOX A6648, Air Conditioning, Heating & Refrigeration News.

EQUIPMENT FOR SALE

NOTICE: DISTRIBUTORS, dealers, servicemen, users refrigeration equipment—repair parts available all models Baker ammonia and Freon compressors. Also models 6B and F6B ammonia compressors. We are exclusive Baker export sales office. Manufacturers' export agents refrigeration, air conditioning, and allied equipment. THE KEISER COMPANY, 7651 South Ashland Avenue, Chicago, Illinois.

ATTENTION REFRIGERATION Servicemen. Send for catalog listing values in refrigeration and air conditioning parts, relays, capacitors, compressors. Savings up to 50%. WALTER W. STARR, 2833 Lincoln Ave., Chicago 13, Illinois.

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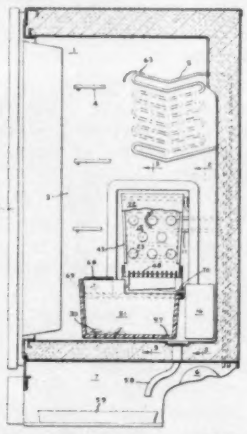
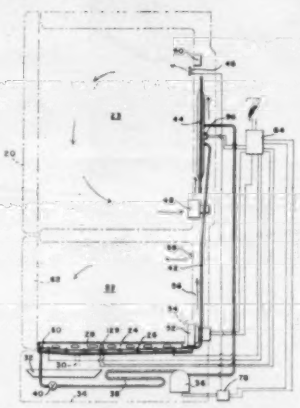
member pivotally mounted for rotation on said apparatus; switch means for discontinuing operation of said apparatus when engaged by said switch-actuating member; means biasing said switch-actuating member to a first position out of engagement with said switch means. . . .

2,940,276. AUTOMATIC ICE MAKER. Henry J. Loewenthal and Harold P. Harle, Louisville, Ky., assignors to General Electric Co., a corporation of New York.



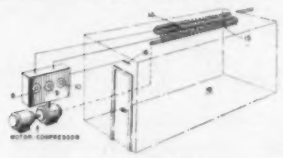
1. In combination, a refrigerator cabinet including inner side walls defining a storage compartment, one of said walls having a recess therein, a tubular evaporator comprising a plurality of passes disposed in a vertical plane in said recess, an ice making element vertically disposed in said recess in front of said evaporator, said element comprising spaced vertical face and rear sheets, said face sheet being formed to have a plurality of depressions therein, said rear sheet being in heat exchange relation with said evaporator. . . .

2,940,277. DEFROSTING SYSTEM FOR A REFRIGERATOR. John Pas and Edward C. Simmons, Dayton, Ohio, assignors to General Motors Corp., Detroit, Mich.



1. A refrigerator including a cabinet provided with a freezing compartment and a food compartment, a freezing evaporator for cooling the freezing compartment and a food compartment evaporator for cooling the food compartment, refrigerant liquefying means operatively connected to said evaporators, a defroster heater for heating said freezing evaporator for defrosting, means for normally cycling said refrigerant liquefying means to maintain said compartments at desired temperatures, defrosting control means for rendering ineffective said normally cycling means and for periodically stopping said liquefying means and for coincidentally energizing said defroster heater. . . .

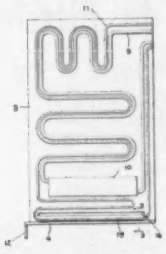
2,940,278. DEFROSTING CONTROL. Selmar Raymond Thompson, 1107 North Shore Ave., Chicago, Ill.



1. A defrosting control comprising, a single unit evaporator located in a refrigerating chamber, a circuit; for connecting a source of power with a refrigerant-producing unit, three independently operable switch mechanisms, a thermal motor connected to actuate each of the switch mechanisms, three temperature-sensitive instruments connected to the respective thermal motors two of which instruments are contactually positioned at spaced points on an evaporator and the third positioned adjacent the evaporator. . . .

2,940,279. DEFROSTABLE EVAPORATOR STRUCTURE. Frank A. Schumacher, Louisville, Ky., assignor to General Electric Co., a corporation of New York.

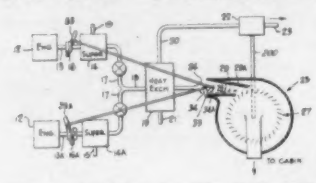
A defrostable evaporator structure comprising a vertically arranged, one-piece, tube-in-sheet evaporator having formed therein a refrigerant circuit



and a hot gas defrost circuit separate from said refrigerant circuit, a drain trough integrally connected to the bottom portion of said evaporator, said evaporator having a slot extending substantially the width thereof below said refrigerant circuit and above said trough to partially insulate said trough from said refrigerant circuit whereby said trough normally operated at a temperature a few degrees higher than the portion of said evaporator above said slot. . . .

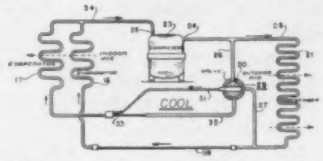
2,940,280. VARIABLE COOLING TURBINE. Wilbur W. Reaser, Pacific Palisades, Calif., assignor to Douglas Aircraft Co., Inc., Santa Monica, Calif.

1. An air-conditioning system for an aircraft's enclosure, comprising: a plurality of powered means for affording pressurized air, each of said powered means including disconnectible means connecting same to its power-source; a pressurized-air operated work-doing means, said means having a pressurized-air inlet throat including means movable therein to increase the velocity of air inlet into said work-doing means, and said work-doing means including an air-discharge leading into said enclosures; conduit means connecting said air-affording means to said inlet throat; and control means connecting the velocity-increasing means in said inlet to each of said disconnectible means....



2,940,281. AIR CONDITIONING APPARATUS WITH PROVISION FOR SELECTIVE REHEATING. Alfred Armstrong, East Longmeadow, Mass., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa.

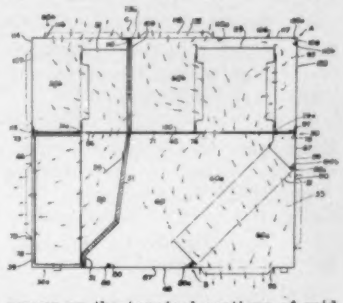
1. In air conditioning apparatus including a compression refrigeration system, a compressor, a condenser, an evaporator, a heat exchanger, means for propelling air to be conditioned over said evaporator and over said heat exchanger, conduit means connecting said compressor, condenser



and evaporator in series for refrigerant flow therethrough in the order named, means including a valve for selectively routing refrigerant from said condenser through said heat exchanger to said compressor or from said compressor to said heat exchanger and back to said compressor. . . .

2,940,282. AIR CONDITIONING APPARATUS. John P. Guerra, Buffalo, James J. Mahoney, Kenmore, and James P. Prediani, Buffalo, N. Y., assignors to Pedders Corp., Maspeth, N. Y.

1. An air conditioning unit comprising a rectilinear casing having an open vertical corner, an air conditioning system disposed within said casing, and including a condenser, means securing said condenser within said casing diagonally across the open corner thereof, a closure for the open corner of said casing having two sides of identical proportions and having a duct opening in one of its sides, and means removable securing said closure to the casing including interengaging



means on the terminal portions of said sides and the adjoining portions of the said open corner of the casing. . . .

(To Be Continued)

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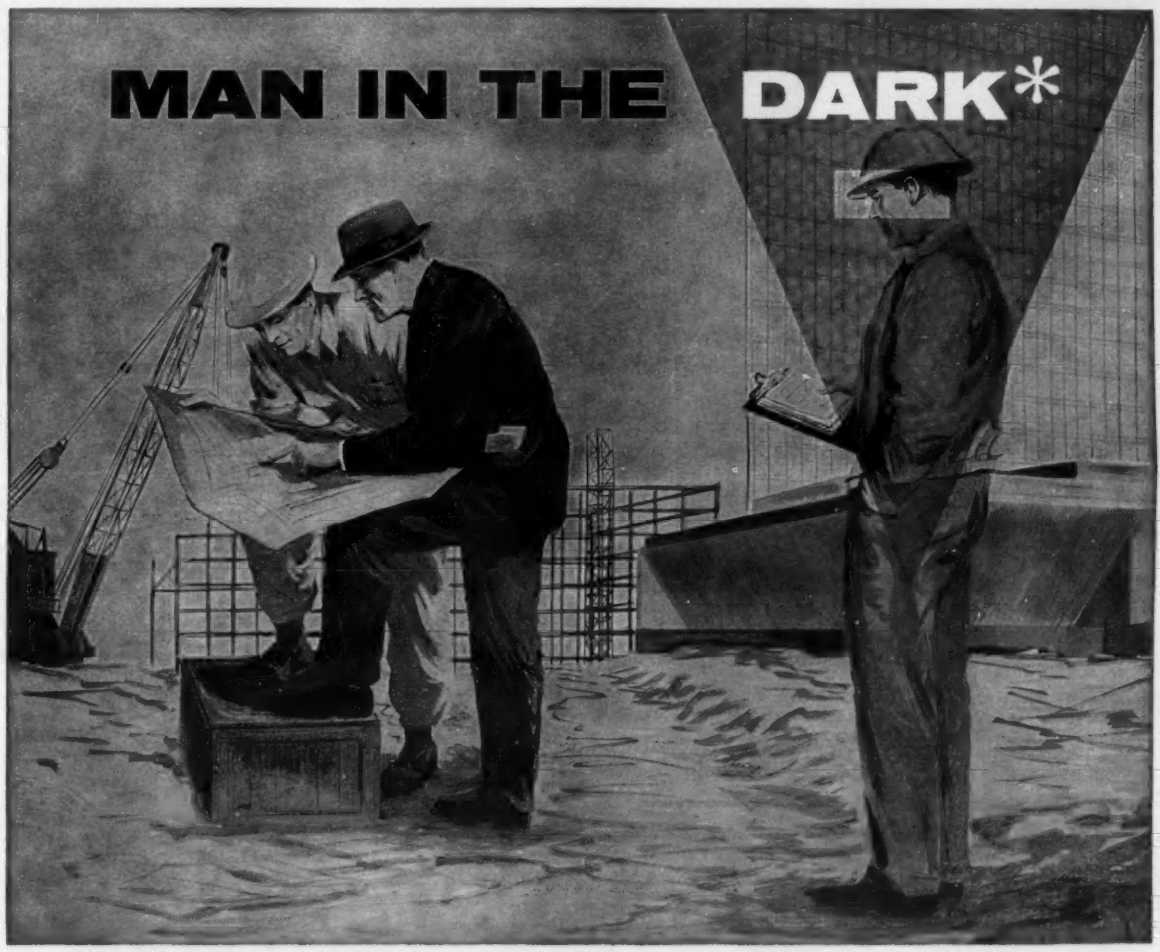

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Reaching these MARKETS	Serving these FIELDS
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Gibson Dealers In Hawaii--

(Continued from Page 1, Col. 3)

a reward for selling quantities of refrigerators, freezers, and room air conditioners.

Many glamorous alternatives are available to them: cruises, visits to neighboring "unspoiled" islands, scenic bus tours, red carpet receptions by U. S. Navy Brass at Pearl Harbor, or just plain lolling on the sands.

Yet, every morning they turn out to hear hours of speeches by so-called "experts," and every night they listen to more exhortations from Gibson "brass" (Charles Gibson, Bill Conley, Lou Hamper, Dale Heinlen, *et al*).

Morning speakers include such notables as President Donald Phillips of Hillsdale college, Dr. Fred Siebert of Michigan State university, Prof. Harold Weiss of American university, Dr. Esther McCabe of Columbia—plus industry journalists Larry Wray, John Adams, Earl Lifshey, Al Bernsohn, Ed Allen, and the oversigned.

All these *talkathon* perpetrators aren't here at the same time, of course. Neither are all the Gibson dealers.

One Planeload Leaves, Another Arrives Every 24 Hours

Every day one tired and grumpy planeload arrives. Every night another wornout but gay planeload departs from the islands.

Same airplane shuttles daily each way—and it's getting tired, too. Many trans-Pacific flights have been delayed several hours by "equipment failures" recently.

No wonder! It's the largest mass airlift operation in history.

Background of Gibson Invasion of Hawaii

Perhaps at this point we should begin to recapitulate the beginning of this Gibson invasion of Hawaii.

During a five-week period Gibson has been hosting some 5,000 dealers, suppliers, and assorted wives in the Hawaiian Islands.

Each dealer earned the excursion by equalling a quota.

By exceeding it, he could bring along wifie and kiddies for a four-day funfest Japanese teahousing, Hawaiian luaus, a tremendous Wilding Productions musical comedy, fashion shows, ceremonials, conducted tours—alas, and lectures, too—all organized on split-moment schedules.

And, every night, these dealers are hatboxed into signing up for next year's Gibson junket (Panama) by promising to sell X numbers of Gibson products in 1961.

Orders Firmed are 47% Ahead of 1960 Level

It's wild, it's unbelievable, but it works. Chuck Gibson and Bill Conley aver that orders firmed in Honolulu are 47% above their 1960 production.

What this activity signifies to the small town of Greenville, Mich., is immense. It is the difference between "going on relief" and buying a new Oldsmobile.

It means steady employment, rather than sporadic and uncertain paychecks, for Gibson-Greenville citizens.

Five years ago Gibson inaugurated this "you sell our line and we'll give you a good time" journey. Less than 300 dealers showed up at Las Vegas for the first.

From New Orleans to Havana to Puerto Rico to Hawaii this idea has ballooned until Gibson now is represented by several thousands of dealers.

Nor are foreign markets being overlooked. Gibson, like Typhoon Air Conditioning, is a subsidiary of Hupp Corp.

Messrs. Smith, Scantlebury, Cline, Prentice, Suazo, and Middleton of Hupp International have been active in the Gibson-Honolulu confabulation, and they've imported some of their best foreign distributors to this continuous carnival.

Example: after one morning session in which this reporter was "on stage," the following importers clapped onto him for an informal discussion of world trade problems and potentials:

John Papozoglu, Athens, Greece.

Gabriel Freiha, Beirut, Lebanon.

William Cullen, Ghana and Nigeria, Africa.

Alex Reddin, general manager of Unilever's African Dept. (which is bigger than Unilever's Lever Bros. operation in the U.S.A.).

Sum-up: these Gibson "see-the-world" promotions have been immensely profitable to the parent corporation, and obviously they've thrilled thousands of small-town dealers.

To the latter 12-hours-a-day storekeepers it has been THE Experience of a Lifetime.

Consulting Engineers Council Meeting To Be In Pittsburgh Nov. 10-12

PITTSBURGH — The semi-annual meeting of the Consulting Engineers Council will be held Nov. 10-12 in the Penn-Sheraton hotel here.

President Hueston M. Smith of Smith, Hanlon, Zurheide & Levy, Inc., St. Louis, said the council's executive committee will meet two days prior to the general meeting of directors.

The council is made up of 31 state associations. Each state association has a director and alternate director to CEC and they will make up the main attendance. President Smith said, however, that the meeting is open to all CEC members.

The council's 31 state association membership probably will be enlarged with the admission of one or more new groups, reports Larry N. Spiller, executive secretary, in outlining the prospective agenda. He said other subjects that probably will come up for discussion are:

The recently adopted NCSBEE model law provision pertaining to corporate practice.

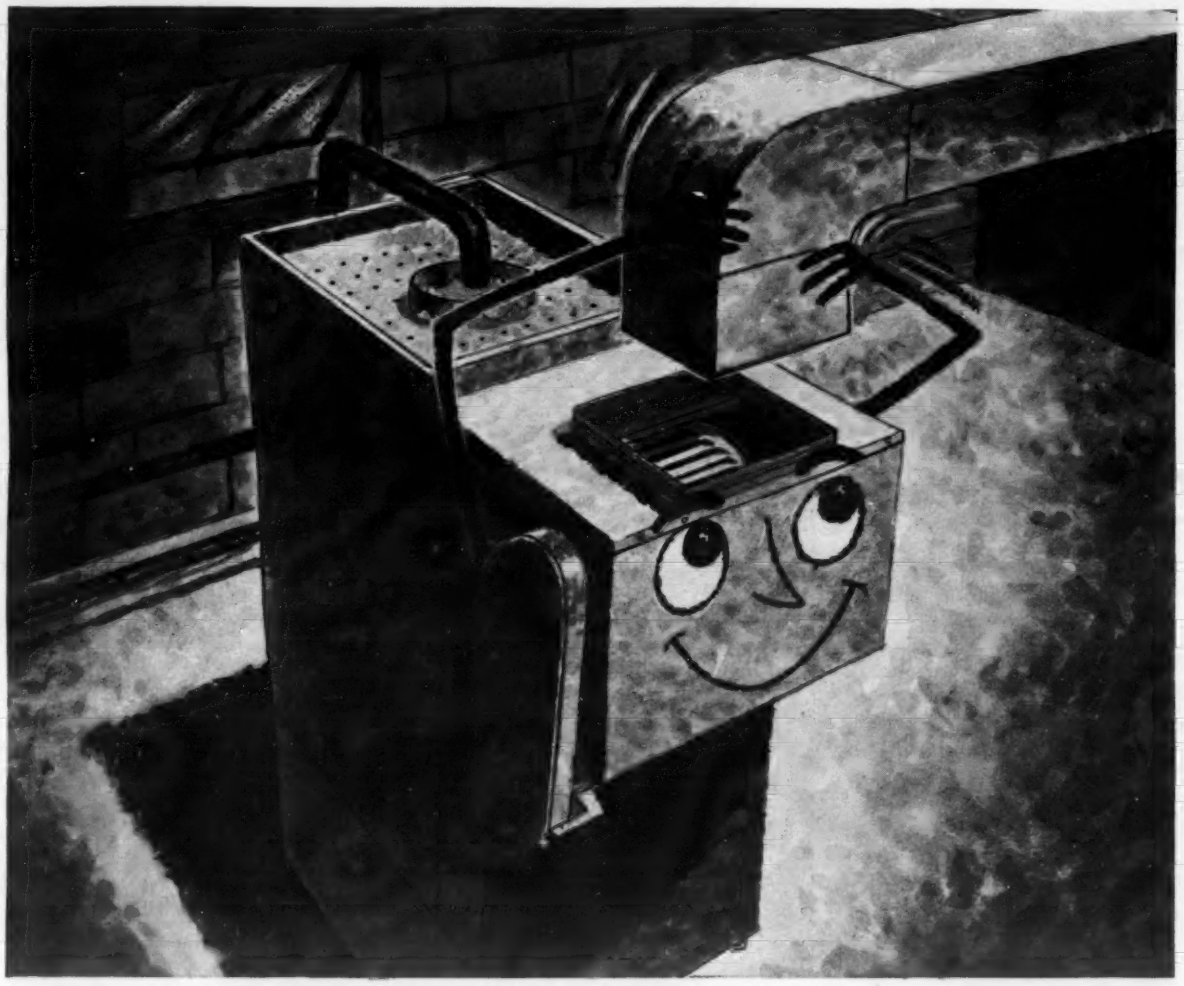
CEC's Private Enterprise Program, to further private enterprise interests of consulting engineers.

Republish the CEC "Manual of Principles and Performance."

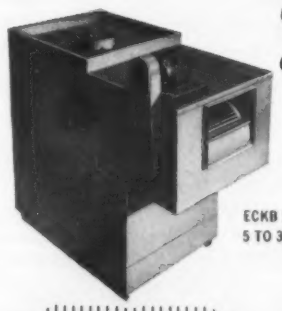
Expansion of the CEC listing of member firm's engineering specialties.

Review the first draft of an expected compilation of all existing engineer fee schedules.

Increased cooperation with the International Federation of Consulting Engineers.



Need a cooling tower that can handle ductwork?



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Proper air flow is maintained against the high, internal resistances of long duct runs when the cooling tower must be installed indoors.

H&M towers are available with horizontal discharge (ECKB Series) or vertical discharge (ECKVB Series) in capacities of 5 to 30 tons. Towers can be shipped as Take-Aparts, too, if specified at time of ordering.

Phone your local distributor for Bulletin ECKB-601 with complete information, or write to Halstead & Mitchell Co., Bessemer Building, Pittsburgh 22, Pa.

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